The Builder.

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Anglo-Indian Architecture.

WE publish among our illustrations this week two large elevations of a design which received the first premium in competition for an important Government building to be erected in Bombay, the work of an architect whose name has been long prominent in connexion with English architecture carried out in the Indian peninsula. The design, for reasons of which we have never got a clear explanation, was abandoned, but it serves, nevertheless, in connexion with its author's own statement, his architectural confession of faith in regard to his design, which we print on the page devoted to a description of the illustrations, as an example of one out of two conflicting theories as to the course which architecture, carried out by English hands on Indian soil, should take;—that of adopting or assimilating native styles. The opposite theory, that of planting European forms of architecture on Indian soil, with little modification, may be taken as represented in the large group of railway terminus buildings recently erected at Bombay, and illustrated in the *Builder* for October 13. Whether we are to regard either of the designs thus illustrated as satisfactory examples of the respective methods referred to is not the question at the moment; it is sufficient that they are, in point of scale, important examples of the two opposite principles referred to, and from what we have seen in Anglo-Indian papers, this question, between native or English styles, seems to have been taken up and argued rather warmly, partly in reference to one or other of these designs.

It is an indication of progress, and of a more serious interest in architecture among the English community in India, that there should be any principles, or any arguing at all about the matter. When we started building in India for our own wants, we mostly just did over again, in this very different climate, what we were doing in England; beginning with colonnaded buildings and porticoes of pseudo-Classic architecture, and presently introducing Gothic (of a very Strawberry-hill type) for churches; the mistakes made in England in the way of archæological sham architecture being made over again in even worse form in India, because architectural design was mostly taken in hand by engineers, who did not even properly understand how to carry out archæological architecture. There are signs that the rule of the engineers is coming to an end, and that the idea of the necessity of some artistic element in architecture, and some artistic study to produce it, is taking popular form; and therefore the question, in what direction Anglo-Indian architectural design should be developed, becomes of especial interest just now.

Mr. Chisholm's description of his design and its intention, printed on page 322, amounts, as will be seen, to a decision in favour of almost complete and unreserved reproduction of Hindû architecture of a certain type, with a slight admixture of Mohammedan details, but only such an admixture as had been made already in Indian buildings, executed since the Mohammedan conquest, but before the conquering race had developed the peculiar phase of architecture of which they subsequently left such exquisite remains on the soil of India. Mr. Chisholm speaks, indeed, of proposing to adopt a "modification" of a Hindû phase of art, but the modification seems to consist mainly in the omitting of some of the characteristic decorative details peculiar to the style, and even this omission the author of the design refers to sadly and with regret. After first proposing "a modification of an Eastern phase of art," he describes the building in a later sentence as "Hindû of a very pure type, merely adding such Mohammedan forms as expediency demanded in positions duly sanctioned by usage." This seems to amount to pure copyism, though "in regard to details, the enthusiastic admirer of old work will be grieved to find many familiar forms omitted or pared down, so as to be hardly recognisable; but this, alas! is inevitable." It seems clear, therefore, that what Mr. Chisholm desired was to reproduce an ancient Indian building precisely, and he only regrets that, for reasons which are left to our imagination, he might not do so. It is these inevitable and regretted omissions, perhaps, which produced on us the impression which we mentioned in noticing the drawings at the Academy, that the design was an Oriental one spoiled by European elements—Oriental without Oriental feeling. The author of the design, in a criticism on our criticism, disclaimed all intention or effort at giving European feeling to it, and perhaps the true explanation of the impression it produced on us may lie in the omissions alluded to in the author's report, which leave us a building with the angularity of form and crudeness of detail characteristic of the native style, without the richness of effect which atones in some degree for the inferior æsthetic of Hindû architecture.

This latter impeachment Mr. Chisholm, no doubt, would deny: so would Fergusson, whose "History of Indian and Eastern Architecture" threw an entirely new light on, and gave a new interest to, the subject. Considering how it had been neglected by English writers previously, and that Fergusson was practically first in the field on the subject, it is not unnatural that he should have given to this subject one-third of the whole space which he devoted to the history of the architecture of the world; but, apart from this special favouritism, such a division of the subject was certainly most disproportionate. Mr. Chisholm's enthusiasm, which sees in Indian architecture work "second to no art in the world but that of Greece," appears to us equally out of proportion. This kind of exaggeration strikes us as a curious instance of the extent to which people may be carried away into enthusiasm for crude and *bizarre* forms of art, under the influence of special study or interest. You may learn to like anything if you try hard enough. Fergusson made Indian architecture his specialty, and managed to work himself up into an enthusiasm (not always communicated to his readers) even over things that are like the architecture of nightmare, without form, proportion, or logic. The purer and semi-classic forms of some phases of Hindû art are very different from these; but even here how inferior in refinement are the mouldings and the proportioning of the parts, not only to Greek, but even to Roman and Renaissance work. And when Mr. Chisholm can speak, as he does, of the gradual degradation of Hindû architecture through Saracenic influence, the Taj at Agra being quoted as the lowest point of this descent in the architectural scale, we can only regard this as what may be called architectural criticism turned upside down. Regarded merely as a design, the Taj is marked by a purity of line and balance of proportion which may really be called quite Greek, in comparison with the crude details and often disproportioned parts of even the purer forms of Hindû architecture.

One reason, possibly, for this exaggerated

estimate of the purity of taste and detail of Hindû architecture is to be found in the fact that most students who approach the study of Indian architecture are led to expect to find it especially marked by a barbaric richness of effect rather than by any approach to pure form. When such students, therefore, meet with designs showing columns and capitals with a certain resemblance to Classic work, and spaced with regular intercolumniations, and so on, they consider they have been duped hitherto. Here is a new and Classic form of architecture such as they never expected, and forthwith the Hindû architect is ranked with the Greek, with the additional satisfaction derived from appreciating that which is caviare to the general. On the part of an architect, such a perversion of critical judgment could only result, as it appears to us, from a constant habit of looking at buildings with bad detail, and laying aside the study of and familiarity with good detail: especially mouldings. These, as Quatremère de Quincy said, are what show the true distinction between refined and unrefined architecture; and no architecture marked by ill-drawn, crude, disproportioned profiles in its mouldings can ever permanently take rank as a fine style of the art, however it may become a fashion for a short time, or with a few perverts. Architects ought to be kept, by their training of the eye, from thus turning aside into the bypaths of architectural style. Engineers, who still have a great deal to do with Anglo-Indian architecture, and who (to judge from visible results) never give a thought to the design of mouldings, or recognise that there is any design in the matter, are, of course, a much easier prey. This is curiously illustrated in a publication by an Anglo-Indian engineer which has been sent to us; a portfolio of studies for various types of building,* based on Hindû architecture. With the feeling which prompted the publication of the book we have a certain sympathy, and we are always glad to meet with an engineer (there are not too many of them) who considers architectural beauty a thing worth caring for and being enthusiastic about. Mr. Harrington grieves over the crushing out of the old Hindû architecture, first under Mohammedan influence, and, secondly, by the debasement of modern Hindû buildings by the introduction of European styles, "producing a combined Anglo-Hindû-Saracenic, as objectionable as it is unmeaning and degenerate." He wishes to see "the noble ruins of a once magnificent architecture" raised again into an architecture of modern life, and this can only be done by the influence of the Hindû people themselves, when they have become sensible of the absurdity of modern combinations of incongruous styles, "and are determined to restore Hindû art in its purity, adapting it, as far as possible, to modern thoughts and necessities." The great native patrons of art in India have abandoned the indigenous style, Mr. Harrington tells us, and have erected palaces after European styles, because "the untrained native designers are incompetent to adapt modern conveniences to their traditional methods"; which we can readily imagine to be the case. "In the pictures which I give in this portfolio," says Mr. Harrington, "I have studied to apply the indigenous Hindû art in strict purity to the modern necessities of civil architecture. The last fifty years have brought about a great change in the conditions of life among the Hindûs. They now require high and well-ventilated houses where they were formerly content to dwell in a mazy labyrinth of dark and narrow rooms and galleries. Of the difficulties which beset me for the moment, the want of measured drawings of existing ancient Hindû buildings was my greatest." We fear there are more difficulties in such a task than Mr. Harrington is aware of. His attempt is well meant, and in a sense it may be said that it was spirited of him to make it; but of the result the less said the better. He has managed to get hold of all the clumsy qualities of Hindû architecture; its coarse, uncouth, ill-designed mouldings (which, indeed, he has bettered, or rather "worsered," in this respect), its ill-considered proportions, without any of its richness or picturesqueness. No one whose eye had been trained upon Classic or Gothic detail could have endured, much less have deliberately put together, such uncouth architectural imaginations. We were much tempted (having permission to use any plate) to publish the "Façade for Municipal Offices" in the Hindû style; but it would be unkind to do so. What we can assure Mr. Harrington is this, that if any attempt should be made to revive and adopt ancient Hindû architecture to modern, it would be a task not to be undertaken with any chance of success save by those who have familiarised themselves with the best schools of architectural style and detail, and have thereby acquired the power to modify and refine upon the Hindû detail in such a way as to revive something of the spirit of the style without its clumsiness of profile and proportion; and those who attempt the task without such training will only produce results which, like his unfortunate portfolio of studies, may be cited as a warning rather than an example.

Apart from this, however, it is odd that any one who has noticed the fact that the eminent native men are taking to European modes of architecture should not have considered how this fact bears on the probability of the future course of native architecture in India. The most prominent and best-educated among the natives, we take it, are almost of necessity the most Europeanised in their tastes and ideas. But the influence which affects them now will affect the inferior classes of the natives in time. The complaint against the native at present, on the part of the Englishman in India, is exactly that he is not at present sufficiently imbued with European habits, tastes, and principles; that it is desirable he should be Europeanised in his ideas. And when he becomes so, as undoubtedly, in spite of all obstacles of caste and prejudice, he will in time, among the forms in which his Europeanised taste is displayed will be his architecture. The Europeanised Hindû will not care for the revival of the ancient Hindû style; it will not suit his feelings or his tastes; he will want to Europeanise his house. This may be regretted on some grounds; but it is the almost certain result of the extension of a European civilisation.

History shows, too, that in the past it has almost invariably happened that a conquering nation carry their own architecture on to the conquered soil. It is the natural tendency of things that it should be so. Wherever the Roman legions went, the Roman Orders followed before long. The partial exception, perhaps, was Egypt; there only the Romans seem to have influenced and modified the architectural style of the country rather than entirely supplanted it. But there they came in contact with one of the most dignified, impressive, and complete styles of architecture that has existed, compared with which, the Hindû, with its want of fixed principle, and its rambling varieties, can scarcely be called a style in the true sense. We are disposed to think, therefore, from the analogy of the past, that the theory of the English builders adopting with little modification the indigenous style of the country, which is illustrated in the competition design we publish this week, is a mistaken one; that the attempt to pursue Anglo-Indian architecture on that principle would fail in the end, from this cause if not from any other, that it would be at variance with the feeling of a Europeanised country. We regard Mr. Chisholm's study, however, as an interesting and, in many respects, pleasing one, which has partially failed in effect from having fallen short of Indian richness and picturesqueness, without the compensation which might have been gained by the introduction of more of the refinement of detail and proportion taught us by Classic work. The author of the design, however, makes a good suggestion in his remark that if the Greek architect had worked in as hot a climate as India, he would, perhaps, have adopted the sunshade as a part of the entablature. Possibly; but he would have designed it in such manner as to appear more decidedly a portion of the construction, less of a penthouse, than it appears in this modern Hindû design. And if the expedient is to be tried of bringing in the ancient Indian style as the basis of a modern style of architecture, it will be by taking the main disposition and ideas of the Indian building, and refining its mouldings and proportions according to better lights; not by mere archæological imitation, still less by repeating and exaggerating, as in the book of designs referred to just now, the worst faults of Hindû architecture.

But the more logical method of evolving an Anglo-Indian architecture of the future will lie, as we have already said, in a treatment based on European style, and adapted, both in design and construction, to the exigencies of the climate and the nature of the materials of the country. For general style and feeling (in modern times, at least, where style is a matter of conscious choice, not of unconscious habit) are the expression of the form of culture and civilisation of the builders; treatment in detail is influenced by climate and material. Anglo-Indian builders do not seem to have made many attempts on this principle as yet: they have been mostly content with building European architecture over again.* But the modification of either Classic or Gothic types to suit the climate and surroundings of India,—not without hints of architectural sympathy, so to speak, with indigenous styles,—would form a fertile source of suggestions for new architectural effect and expression. We do not see why either Gothic or Classic types may not be made the basis. Fergusson has left on record his opinion that Gothic forms, so nearly allied to Saracenic, seemed to offer the best groundwork for that kind of fusion between the European and native architecture which seemed to be requisite. But it might be replied, on the other hand, that there is something of the same kind of affinity between Classic architecture and some of the Hindû forms. The great point is, that a modification of the style in regard to the climate and associations of India should be set about on an intellectual basis, as a piece of artistic development; a task which requires high artistic culture, and cannot be undertaken *extempore* by engineers or others who have given no study to architecture as an art. The large railway buildings at Bombay, which we illustrated two or three weeks ago, represent to a certain extent the theory of European style with special local treatment; and its architect has done well, at all events, in searching for decorative detail from native vegetation, and in endeavouring to bring out the taste and ability of native art-workmen in this class of detail. Truth compels us to say, however, that the space we gave to the illustration of the Peninsular Railway Terminal buildings was rather in proportion to the size and importance of the work than to its architectural quality; and the great admiration which the building seems to have evoked locally is one among the many other indications that, in regard to art and literature, Anglo-Indian taste is still in a very provincial stage. It is in Calcutta that would-be great musical executants, who have been estimated at their true value in London and Paris, rise up again, and are placed on a secondary pedestal of fame. It is in Anglo-Indian literary conversation that we hear that Sir Edwin Arnold's "Light of Asia" (being on an Indian subject) is the greatest poetic work of this age. And so, in Bombay, we find people indulging in considerable raptures over architecture which is put forth as "Italian Gothic," but which, it is to be feared, some irreverent people in London would classify as "Manchester Gothic." Allowing everything for good intention, it is matter for regret that so vast and costly a building should have been erected in a style so devoid of artistic refine-

* Portfolio Studies from the Ancient Hindû Architecture. By B. R. Harrington, Civil Engineer. (No publisher's name.)

* Mr. Emerson, if we remember right, left in India some buildings in which Gothic and Oriental feeling were combined with some originality and success.

ment and reserve, to put the matter in moderate language. The great Anglo-Indian cities, as it seems to us, are much in want of their Norman Shaw; and, if the business were once got out of the hands of the engineers who have made such sad havoc with it, there might be scope for one or two young architects of genius to give a new turn and development to Anglo-Indian architecture, and make the commencement of a new chapter in the history of the art, for which we are still waiting.

THE INNS OF OLD SOUTHWARK.*

FROM time immemorial "The Borough," by which name the Borough of Southwark,—especially its High-street,—has long been familiarly known to Londoners, has been famed for its inns; for their number, their capacity, and their excellence. As you run your eye over the map you may still see rows of them side by side, or trace in the disposition of the present buildings the places where long-vanished inns have stood. By their plans you shall know them — the narrow bottle-neck entrance, well barred for defence, expanding rearward into open courtyards surrounded by buildings upon which Commerce has for various uses laid her hand, but which were formerly stables and storehouses necessary for the wants of throngs of visitors. Many causes combined to make "the Borough" the paradise of innkeepers. The water of the Thames in its ancient unsophisticated state was found to possess peculiar virtue for the brewer; the praises of Southwark ale have been sung in strains of undetermined antiquity, and thither the lovers of strong ale naturally resorted. Southwark itself, as its name indicates, was simply an outlying portion of the City defences—a tête-du-pont—covering its approach from the great main road which gave access not only to the populous and thriving southern counties, but also to the great ports which were the points of debarkation for the most-frequented portions of the Continent. As a natural consequence of the traffic along this busy route, a population grew upon its borders devoted to the wants of travellers, until, in the early years of the sixteenth century, the inns were out of all "proportion to the ordinary shops and dwellings," and a State paper of 1619 describes "the Borough" as consisting "chiefly of innkeepers."

The word "inn" meant originally simply an enclosure or dwelling; though later it became the equivalent of the Continental hotel. The great nobles and dignitaries of the church had their inns, the rendezvous of their family and retainers, and this use of the word still survives in Barnard's Inn, Thavie's Inn, the Inns of Court, &c. They were, in short, the town-houses of the great ones of the period. The hostelry or herbergery was the precursor of the modern hotel, differing therefrom inasmuch as it did not, as a rule, supply lodging as well as board. This may be accounted for by the fact that the great religious houses which were scattered broadcast over the country offered board and lodging for three days indiscriminately to all wayfarers, free, or for such gratuitous douceur as the departing guest chose to give. With such competitors for public favour in the field, there was but little want of inns. The tavern or ale-house was the haunt of roysterers and gallants, whose pranks would have met with rebuke under the monastic roof, and the halting-place for the numerous wains which traversed, for business or pleasure, or both combined, the great highways of the kingdom.

The inns of Southwark belonged to an exceptional, although numerous, class. Chaucer's nine-and-twenty pilgrims slept at least one night at the "Tabard," and the known extent of this and the many neighbouring inns can only be explained on the supposition that large bodies of people sought similar hospitality within their walls. It was not, however, until the Reformation had destroyed the monasteries, and reduced their inmates to want and vagrancy, that the necessity for great inns in large numbers arose. The ever-lengthening trains of attendants on the newly-enriched nobles in their frequent journeys to and from the capital called for vast establishments, and many of the seventeenth-century inns were capable of housing from three to four hundred guests, with their attendants.

The English inn, thus suddenly developed, at once acquired a character for comfort, and even luxury. The host did not lord it over his customers after the foreign manner, but was the obsequious servant of all. His ready smile welcomed their approach; each was free to do as he listed, and call for what he pleased with the certainty that it would be more promptly forthcoming than in his own house. The accounts of the furniture of these old English inns are startling in their copiousness, and contrast strangely with the vacuity of some of the larger mansions of that time.

Harrison, writing in 1577, says:—"Our innes are verie well furnished with naperie, bedding, and tapisterie; for, beside the linen used at the tables,—which is commanlie washed daily,—is such as belongeth to the estate and calling of the ghest. Each commer is sure to be in cleane sheets," and the "ghest" might, when once his chamber was appointed, "carie the kaie with him," and "if he loses ought whilest he abideth in the inne, the host is bound by a generall custom to restore the damage."

The picture drawn of these inns by a contemporary is quite idyllic. Not only is the fortunate "ghest" treated to the daintiest meats,—dressed to his liking,—and to the choicest wines whereof Southwark in especial had always good store; but if he desired music with his repast, "minstrells, musicians, and chaunters" were at hand, and the host and hostess with superfluous courtesy offered to bestow their company upon him at the board. At his departure, the reckoning was set out in writing, if he wished it so; and if the "ghest," after such handsome entertainment, could find it in his heart to complain of the bill, it was reduced to his satisfaction. He was finally bowed out with smiles and benedictions, whilst the chambermaid and ostler brought up the rear and joined in the happy chorus. Oh! those good old times! One's spirits are a little dashed to learn that the polite ostler cheated the poor horses of their provender, if not well watched; and that the tapster was commonly in league with the footpads, who were duly advised by him of the "ghest's" departure and probable route.

Amongst inns of the best type, those of Southwark were pre-eminent, and their fame went out through all the land. One of their functions was the entertainment of strolling players, for Southwark may be called the cradle of the British drama. In the capacious courtyards of its vast inns, rude scaffolds, or "stages," were erected across the entrance; the groundlings sat on the straw in the open court, whilst the "quality" ranged themselves in the surrounding galleries, — the modern dress-circle, or occupied the small chambers abutting thereon, — the modern private boxes. Nothing could have been more convenient for the purpose, and the fitness of the whole is shown in the fact that the theatre of the present day does not differ in principle from this primitive plan. The records of the time bear witness to the showers of expostulations with which the "poor players" were persecuted. But the popular taste proved too strong for the remonstrants, and the drama grew and flourished under the auspices of the inns which shared in its prosperity. The chief of them were the Tabard, the George, the White Hart, the Flower-de-Luce, the Mermaid, the Christopher, the Crown, the Cock, and the Ram's Head; but there were many more.

Of the Tabard, most ancient and most renowned of all—built about 1306—nothing, except perhaps the foundations, now remains. The original structure, which was mainly of wood, was destroyed by the Great Fire of 1676, which swept away the George, the White Hart, the King's Head, the Queen's Head, and others. The building which was erected on the site of the older Tabard has now also passed away. Some of its features have been preserved in prints and drawings, which show that its plan was of the common type. The age of the building shown in Urry's print was discussed in our issue of June 28, 1873, and assigned to the reign of Charles II. Its sign has undergone the customary variations, from Syrcote, Circot (=Sur-coat), to its synonym Tabard, and so to Talbot; and its modern representative will no doubt in time become the Turbot, with the eventual addition of "and Lobster Sauce." Stranger things have happened to inn-signs. The wholesale disfranchisement of the saints in the sixteenth century led to equally curious results—turning the Salutation of the Angel to the Blessed Virgin into a soldier and civilian shaking hands, "God encompasseth us" into the Goat and Compasses, and so on. We have ourselves quite recently seen a sign dating from the Restoration appear newly painted and gilt as the "Royal Mortar"!

These old inns share the immortality of some of the greatest names in English literature—Chaucer, Shakespeare, Ben Jonson, Dickens.

Shakspeare lived for a time in Bull Head-alley, and Sir John Falstaff was the owner of a considerable part of Southwark, including "The Cok," the Boar's Head, which he bequeathed to Magdalen College, and others. It is certain that both the artist and his subject were frequent visitors at the Tabard, and it is not improbable that the carrier scene in "Henry IV.," though laid at Rochester, may have been really sketched in Southwark, for carriers were amongst the inn's constant customers.* Whatever warrant there may have been for the Falstaff Shakespeare drew—and authentic history presents him in a somewhat different light—the descriptions of the scenes in which he figures give a clue to many of the features of the lost inns of his time—the ale-benches upon which he slept in the sun after dinner; the red lattice-windows through which Bardolph's fiery visage was indistinguishable; and the parcel-gilt goblets and flea-bitten tapestry of the too-confiding Mistress Quickly.

The White Hart has even a more stirring history than the Tabard, for it was here in 1540 that Jack Cade held court, that Lord Say's dead body was mutilated, and prisoners of all sorts were done to death. In later days it was the scene of an incident in Dickens's most successful novel, but now nothing of it remains.

The George,—formerly the St. George,—is the least altered of all the inns, but it, alas! is doomed. In its palmy days it equipped and sent out daily thirty coaches, and, weekly, fifteen wagons with their teams,—an index to the bustling activity which reigned. One of its chestnut beams escaped the great fire of 1676, and bore the date 1522.† It was called "a Fair Inn" by Stow in 1502. It will shortly exist only in memory, and the same fate is rapidly overtaking its remaining companions.

Sir Christopher Wren built himself a house on Bankside next the Falcon, and is said to have thence daily watched the progress of his great work over the water. Pepys and Evelyn have left frequent references to their visits thither. Almost every great name in English history is connected in some way with "the Borough."

In the delightful book before us, Mr. Rendle, who has spent a lifetime amidst the scenes he so well describes, has gathered all that could be gleaned about the old inns of Southwark, and their inexhaustible associations,—historical, political, antiquarian, social, and miscellaneous. His four hundred and odd pleasant pages are illumined by some of the very best drawings we have ever seen—careful, exact, unaffected, truthful, brilliant,—a lasting credit to his accomplished colleague,

* The Inns of Old Southwark and their Associations. By William Rendle, F.R.C.S., and Philip Norman, F.S.A. With numerous Illustrations. London: Longmans, Green, & Co. 1888.

* This play is generally supposed to have been written in 1597, when Shakspeare was living in Southwark.

† The author of the book before us appears to look upon this as incredible. We have no difficulty in believing it, knowing that hard wood is amongst the best of fire-resisters.

whose pencil has preserved for us so much of what is left of the old inns.

We can mentally restore their architectural features by the aid of surviving buildings of the same character and date elsewhere. The frontage towards the street was usually inconsiderable, the houses crowding each other closely, and all edging Citywards. A broad and high gable surmounted by a gilded vane, flanked by a low archway, distinguished each inn, which was differentiated by a boldly-projecting and elaborately-painted sign. The lower storey would be almost unadorned, the windows sparse and small, and well above the street. The large, square oaken corner-post would seldom be absent, with its cusped panelling, niches, and statues. At the level of the first-floor, corbelled out upon carved brackets, would run a deeply-moulded oaken cornice, its hollows enlivened by foliage and heraldry. The first-floor would be allotted as reception and dining-rooms, amply-windowed, and with occasional oriels, the construction being of oaken framing, filled in with plaster panels and lined on the inside with wainscot. The upper storey, containing the principal sleeping apartments, would project considerably and be carried on the protruding ends of the joists, and behind the gable above, with its cambered tie-beam and carved barge-board, the sleeping-rooms of the servants and "baser sort" would be ranged. The rear-ward buildings would be quite plain, or relieved only by a little ornament in the spandrels of the doorways, and an occasional panel with the arms of the owner. The inner surfaces of the principal rooms would be lined with panelling or hung with tapestry, and have elaborately-enriched ceilings, either in wood or plaster. The fireplaces would be wide and high; in some cases hooded to the ceiling, and the staircases would be substantial and handsome (in one case it was wide enough to allow six people to walk abreast), and with the enclosures to the galleries, the settles, tables, bedsteads, and the rest, would bear witness to the carver's skill. The whole would, perhaps, be a little deficient in both sweetness and light, but it would be eminently picturesque and "paintable." The recent specimens of "Old London" architecture, erected at South Kensington from Mr. Birch's designs, will be in the remembrance of our readers, and give the best idea of the inns that are gone.

By the addition of the words "and their associations" the author has been able to cast his net very wide, and to catch therein all sorts of queer fish. Southwark has been in a marked degree the home of "the Fancy," and as the home of "the Fancy" is generally an inn, a discourse on inns has in the most natural way included much that pertains to the more accomplished professors of "*the* art," from Cribb to Sayers. But these heroes and their feats are out of our province, and so are the humours of Southwark Fair,—the shows, the rope-dancers, strong women, and living skeletons, about all of which and much more the curious may find information in these pages. It would be hopeless, as it would be unfair, to attempt to summarise in a poor column or two all that this author has to say about the old inns, and we must commend all who are interested therein—and who is not?—to this charming book, which has the added charm of perfect paper, printing, and general get-up.

The English inn is passing away. It lingers in out-of-the-way places, and in a few cases lives, or endeavours to live, up to its traditions. But, as a rule, it is now a forlorn and comfortless abode. We are no longer greeted by a smiling host,—a lady clerk ticks us off with chilling unconcern. Our idiosyncrasies receive no consideration. Our very names are ignored. We become mere insignificant units in an indefinite numerical series, and ghost-like, rather than "ghest"-like, poke our way about lonely corridors in big, barrack-like blocks of buildings, "unmarked, unhonoured, and unknown." Our advent brought no welcome, and our exit leaves no regret. The hurry—ever quickening—of our modern life is the cause of the change, for who will put himself about to conciliate a late "commer," who has his bed and breakfast and is off?

When the last of the old inns shall have disappeared, posterity will be grateful to the author of this charming book for such a loving record of their former glories.

NOTES.

A MEETING was held on Monday last, which was convened by the Charity Organisation Society, at which a resolution was passed to the effect that the selection of candidates for the new London County Council should turn on their fitness for municipal duties, and not on political considerations. It is satisfactory to see such strong politicians as Mr. Lyulph Stanley and Lord Hobhouse supporting this resolution. It is most important, having regard to the interests which will be in charge of the new County Councils, such as matters connected with drainage, enforcing the safety of public places, and so forth, that politics should be absolutely banished from consideration. When we consider the immense amount of administrative ability which exists unused in London, it is to be hoped that some of it will find its way to the County Council. There are numbers of able men who have fulfilled high duties in India and the Colonies, or who have managed large businesses in this country and abroad, who would be at home on the Council, and far more useful than the being who is now known as the Vestryman, who has hitherto degraded London municipal government.

WE are at last able to form some reasonable judgment of the "sad Athene" of which the papers some few weeks back gave such sensational reports. As we expected, and at the time conjectured, she is not "sad" at all, only looking down intently. The woodcut before us appears in the July number (just out) of the 'Αρχαιολογικόν Δελτίον. It is from an outline drawing by M. Kaweran. The slab, it will be remembered, was found to the south of the Parthenon. Athene is represented leaning with her left arm on her spear,—her right rests on her hips; the whole weight of the body rests on the spear and the right foot, the left being raised on the toe. She wears a simple chiton and her helmet. The noticeable thing about the composition is the attitude of profound thought with which the goddess is contemplating a small stele in front of which she stands. We think that there can scarcely be a doubt that on it is supposed to be inscribed some treaty or dedication of great importance to the city of Athens. Not long after this stele was found, another of considerable interest came to light, a woodcut of which appears in the same Δελτίον, on which is a representation of a treaty between Samos and Athens, dated by the Archonship given at the year 405-404 B.C. On the head of the stele the goddess Athene, with spear, shield, and olive-tree, grasps the hand of a woman figure holding a spear, who represents the city of Samos. Below is inscribed the treaty.

A DECISION by Mr. Justice Chitty has been recently reported which is of considerable value. The case is that of Cann *v.* Wilson (*Law Reports*, 29 Chancery Division, p. 39). The defendants were asked to value certain property for the purpose of a mortgage, and it was made known to them for what purpose the valuation was required. Upon the valuation being sent in the advance was made. Ultimately the property realised less than the valuation amount, and the mortgagees sued the valuers for the sum which they lost. It appeared from the evidence that the defendants never made any real valuation. They took the mortgagor's figures and then sent in a particular sum as their valuation. Mr. Justice Chitty held them to be liable for the loss on two grounds. The first was that they had incurred a duty towards the mortgagee to use reasonable care in the preparation of the valuation; they failed by their negligence to fulfil this duty, and were therefore liable for the consequences. The second ground was that they had made a statement recklessly with the intention that it would be acted on; they had not taken care to ascertain if it was true, and consequently they were guilty of what is legally termed "fraudulent misrepresentation." We hope that such a way of doing business is exceptional.

IT is probable that in spite of the exhaustive judgment of Mr. Justice Stirling in the case of Lewis *v.* Weston-super-Mare Local Board of Health, upon the construction of section 16 of the Public Health Act, the case in question will go before a higher tribunal. The point upon the construction of this section was as to the meaning of the word "necessary"; that is to say, whether it meant "desirable," or whether it meant "absolutely necessary." This urban local authority were constructing waterworks, and it was desirable that they should be carried through the land of the plaintiff. This clearly was not the only course open to them; but, on the other hand, it was the most desirable one. Mr. Justice Stirling decided that the word necessary in the Act meant "desirable," or, as he expressed it, "necessary for the efficient discharge of the duty in the way which is most for the public interest." There is much to be said on both sides, and it is always difficult to construe such a word as this, since different minds look at it from all kinds of standpoints. We are somewhat inclined to think, however, that the construction adopted by Mr. Justice Stirling gives almost too much latitude to public bodies, and scarcely safeguards private interests enough. Private property should not be interfered with by public bodies if it can possibly be avoided. According to this decision, it would seem allowable to cut up a garden by laying water-pipes beneath it, which was the work to be done in the present case, if, by so doing, a slightly shorter route could be taken, and a few pounds thereby be saved to the community. For, although such a method of carrying out the work would not be absolutely necessary, it would clearly be for the public interest to save money.

"THE Cistercian Abbey of Strata Florida" will be the subject of a volume to be brought out in January next, by Mr. Stephen W. Williams, F.R.I.B.A., whose name we have already mentioned in connexion with the excavations there. It will be illustrated with plans and plates of architectural detail, &c.*

IT is announced that on the morning of Oct. 24 last Manuden Hall, in Essex, Mr. R. Gosling's seat, was destroyed by fire. This ancient house had been lately put into thorough repair. It stands north-east of St. Mary's parish church, which Richard de Corneville and Alice, his wife, gave to the monks of St. Melan, in Britany. It was extensively restored twenty-four years since. Manuden, or Manewden (*vulgo* Mallendine), lies in the Stort valley, in Clavering hundred, on the north-western confines of the county. The manor, which appertains to the Hall, formerly belonged to Robert Greno, or Gernon, lord of Stanstead Montfitchett, close by, who is mentioned in Domesday Survey. It passed to Richard de Playz, who died in 1327; then to the De Veres; and *temp.* Henry VII. one John Gardiner held it of the king for 5s. 11d. yearly rent and fealty. The subsequent proprietors' names form a long list. To this manor is attached that of the neighbouring Battails, or Battles, Hall, which was built by Sir William Waade, Clerk of the Council to Elizabeth and James I. He was son and heir to Armigell Waade, of Belsize, who had served Henry VIII. and Edward VI. in that same capacity. Dying at Belsize, on June 20, 1568, Armigell was buried in the chancel of Hampstead parish church. A voyager in his youth, some aver he was the first of our countrymen to find the southern continent of America.

* Messrs. Whiting & Co. are the publishers.

WE have received Dr. Parsons's report to the Local Government Board on an outbreak of diphtheria in the Exmouth urban sanitary district; the faulty sewage system seems at the bottom of it. The following extract from the report will indicate the conditions:—

"The Local Board have of late years reconstructed some of their sewers, and have constructed an intercepting sewer, which collects the sewage and discharges it into the sea at low-water mark, about three-quarters of a mile east of the town. This sewer has necessarily very little fall, and its outlet is tide-locked for about half of each twenty-four hours. In consequence, there is a tendency to the deposit of sediment in the main sewer and in the branch sewers in the low-lying parts of the town, and to counteract this constant attention has to be paid to flushing. The water company being unable to supply water in sufficient volume for the flushing of the sewers, an arrangement has been made by which a stream can be turned into the main sewer at its upper end in the Exeter-road, and diverted by penstocks into side-channels for the flushing of some of the low-lying branch sewers. The sewers in the hilly part of the town are flushed by holding up the sewage in them. The sewers can only be effectually flushed at low water of spring tide, when there is a free outfall. The sewers receive the surface water, and if a heavy shower occur at the time when the outfall is closed by the tide, the sewage sometimes bursts up from gratings, flooding the streets and yards, and even the floors of some houses in the low-lying part of the town. The ventilation of the sewers has been a matter of difficulty. A large number of grids at the street level were originally provided, but owing to the complaints which were made of foul smells issuing from these grids, many of them,—some fifty or more—have been since closed. In consequence, as the house-drains are neither trapped off from the sewer nor ventilated, when the level of the sewage rises, as it does when the outfall is tide-locked, or during flushing or a storm, the displaced air is driven up the house-drains to escape in or near the houses."

The house-drains are not properly trapped off from the sewers, and (the old evil that occurs in so many of these country districts) many of the water-closets have no water-supply laid on to the pan, but have to be flushed by hand, which, of course, means that they are constantly used without being flushed at all. Another report by Dr. Parsons on an outbreak of the same disease at Llanasa and Whitford, in the Holywell Rural Sanitary District, states that the disease "showed a marked preference for dirty and insanitary houses"—houses with uncleanly surroundings, in the shape of ill-paved yards, with lodgment of surface water and accumulations of manure. In one infected house "the dairy was in direct communication with the blocked drain, from which, when opened, black liquid filth burst up with great force. The larder also, in which the food was kept, had only a borrowed ventilation from the scullery, and in the latter was an untrapped sink." This reminds one of Kingsley's "Yeast," where, by the way, Whitford was the name of the insanitary village. A third report, by the same hand, deals with diphtheria at Llanwddyn, in the Llanfyllin rural sanitary district. This village is situated in the upper part of the River Vyrnwy, on the site of the new reservoir now in construction for the Liverpool water-supply. The origin of the outbreak is not so clearly traced in this case. Of eight families attacked at one time, it was noticed that they all attended church; indeed, such a preference did the disease show for church-goers, that local opinion traced it to some theological cause. Among the practical conditions noted as favourable to the spread of the disease was the separation of houses by a wooden partition only, permitting the passage of air from one house to another; a source of danger which we remarked upon in a recent article on back-to-back houses, where partitions were only carried up to the ceiling line. We have also Mr. Spear's report on the state of the Llandissilio sub-district of the Narberth union, Pembrokeshire. The following description indicates the general state of the village of Llandissilio:—

"The drainage arrangements are such as to cause general nuisance. For the most part slop-water with other liquid filth is cast into open street gutters formed in the bare rock; so that in traversing the long straggling village foul sewage deposits meet one on either hand. And when, as in other cases, refuse matters are thrown to the rear, little care is taken to avoid accumulation and nuisance, so that the result is only a little less unsatisfactory. Privy accommodation is occasionally altogether absent, and when provided is generally of the most objectionable kind. No organised provision exists for the removal of refuse. Water is obtained chiefly from a public well near the centre of the village street. This well is said to supply good water, but it stands close by one of the sewage-ditches. In summer this source fails, and the people then resort to so-called springs, situated behind the village street, amongst kitchen-gardens and manured ground."

We cannot but remark what a large proportion of the insanitary districts reported on are situated in Wales.

THE School Board for London have just published a schedule of the several parcels of land and hereditaments which they propose to take for their next periodical supply of school accommodation. The total number of schools covered by the schedule is fifteen, and the aggregate of the areas to be acquired is about 25,450 square yards, or five acres and a quarter. The sixteen sites chosen (two of them being alternative) for these additional schools are in the undermentioned Board districts. Chelsea: Victoria Board School, Vespan-road: and the Board School in Waterloo-street, both in St. Peter and St. Paul, Hammersmith, parish. Finsbury: No. 111, Benwell-road, abutting on the Forster Board School in Hornsey-road. Hackney: Columbia-road, Bethnal-green, and Well-street, Hackney. Marylebone: Cathcart-street, abutting on the Mansfield-place Board School. Tower Hamlets: a large vacant area in Wharf-road, Cubitt Town. Westminster: Nos. 7–12, Chapel-place, Charing Cross-road, by St. Mary's Church. West Lambeth: nine houses and gardens in Brook-street, together with ten houses, gardens, &c., in Walcot-square, St. Mary's parish. Southwark: Suffolk-street and Dartmouth-road, Rotherhithe; and fourteen houses, gardens, and premises in Charles-street and Church-row, in St. John's, Horselydown, parish. Greenwich: nineteen houses, shops, and gardens, &c., in Grove-street, abutting on Sayes-court, Deptford; or nineteen houses, gardens, &c., in Greenfield-street, Deptford; some vacant land, nearly 54,500 square feet superficial, in Childric-road; two cottages, yards, and tenements in Elmira-street, abutting on the Lewisham Bridge Board School, Lewisham: and ten houses, shops, gardens, and premises, on the eastern side of Burrage-road, adjoining the Board School in Burrage-grove, Plumstead.

ST. CUTHBERT'S CHURCH (or the West Kirk), which occupies a very prominent position at the west end of Princes Street-gardens, Edinburgh, is about to be remodelled under the superintendence of Messrs. H. J. Blanc and Gordon, architects. The present church was erected in 1775 in place of a cruciform Gothic edifice with a massive tower, which suffered greatly during the siege of the Castle in 1689. Frequent repairs and alterations were made upon the old church, but it was ultimately considered necessary to take it down and erect an entirely new one. The new building is a large and clumsy rectangular edifice covered by a single span roof, and was considered so ugly that public subscriptions were obtained for the purpose of adding a tower and steeple, with a view to obviating, in some sort, its ungainliness. This feature, which is placed at the centre of the west gable, is a fairly good example after the manner of Wren and his followers, but groups awkwardly with the huge mass to which it is attached. The interior is as unattractive as the exterior, and contains two galleries, one over the other, running round the west, south, and east sides, the pulpit being placed in the centre of the north side. The proposed alterations include square towers, surmounted by domes, at the four angles, and certain modifications upon the rest of the exterior, especially upon the east elevation. The interior is to be cleared out and the pulpit placed at the east end. The church is seated for a congregation of 3,000, and to provide the requisite accommodation the galleries will have to be retained. It is impossible to make a structure such as we have described "a thing of beauty," and if an entirely new church is out of the question, the proposed alterations are as good as could be looked for in the circumstances.

THE *Art Annual* for 1888 (which forms the annual number of the *Art Journal*), consists of an exceedingly interesting sketch of the life and works of Mr. J. C. Hook, written by Mr. F. G. Stephens, and illustrated by a large number of engravings from the artist's paintings and sketches. Some of the illustrations remind us of phases of Mr. Hook's art which are now almost forgotten beneath the success and popularity of his coast-idylls, as we may call them; but the principal illustrations are from well-known works of the latter class. Among the purely marine subjects are good illustrations of two of his finest works—"Luff, Boy!" and "Crabbers," in the latter of which we can almost feel the spring of the boat over the wave. A study of a fisherwoman, on the opposite page, is one of the most interesting fac-similes of Mr. Hook's rapid sketches. Readers will find much to interest them in the description of the country home made by the artist for himself in Surrey, and of the master of the house, himself as characteristic and picturesque a figure as any of those in his sketches.

IT is a pity that the *Art Journal*, which in its current number gives some charming illustrations of landscapes, of Henner's pictures, and of Mr. Wood's admirable little picture of the "Water Wheel," should not think it worth while to bestow more care upon its architectural illustrations. The last two numbers include articles on "Some Provincial Clubs," by a writer who has certainly no claim to speak as an artistic critic; but the sketches are much worse than the writing, and the so-called illustrations of the fronts of the Manchester Reform Club, and the Liverpool Reform Club, are mere scratches, rather than sketches, without the slightest intelligible representation of architectural detail; some of the others are little better. In the case of the Liverpool Reform Club the writer omits the name of the architect (Mr. E. Kirby, President of the Liverpool Architectural Society), one of the very first things that we should have thought that an art journal ought to have given. The architect, perhaps, might have pardoned that, if his building had not been so travestied. Modern architects have some right to expect, if their buildings are illustrated in a journal devoted to art, that they should, at least, be decently drawn.

LETTER FROM PARIS.

FAVOURED by the exceptionally mild autumn, the work at the Exposition Universelle is being pushed on in every direction with the greatest activity. The erections on the Champ de Mars have now reached a state in which they are of constantly-increasing interest to the visitor. Along the quay rise the time-worn fronts of the historical series of dwellings of all ages, styles, and peoples, erected by M. Charles Garnier; among them a restoration of a Gallo-Roman house, which is a veritable architectural jewel. Then, behind the overwhelming mass of the Eiffel Tower, which has risen 30 mètres in the last two weeks, are the pavilions for the Beaux Arts and the Arts Liberaux, with their elegant domes and their galleries decorated with a long series of bas-reliefs, emblems, coats of arms, and allegorical figures on a gold ground. Near these rich façades, and in the middle of the enclosure, two structures, without character or style, mark the position of the exhibit of the City of Paris. Without doubt this municipal exhibit, which will summarise the work of all the important public offices of the great city, will present an attractive lesson to the public; but, whatever the inventive genius of the architect may be, we much doubt if such ill-favoured erections, supposing them ever to be completed, can be made to group with the general decoration of the buildings, and we

almost regret the parti-coloured pavilion which this exhibit occupied in 1878.

The great machinery gallery is now complete. The effect from below of the skeleton of gigantic ribs, which is now being decorated, is most striking. The decorators have 18,000 square mètres, almost four acres and a half, to cover. This enormous surface is made up of sixteen great panels, each 16 mètres square, in which will be represented the arms and emblems of the capital cities of the world, and 124 smaller panels, which will contain the escutcheons of the chief towns of the French departments. Beneath these panels will be ranged a long series of trophies and emblems, plants, machines, and animals, symbolising the productions of the several countries and places. This gigantic work is in the hands of MM. Rubé, Chaperon, & Jambon, the skilled decorators of the Paris theatres. As to M. Lavastre, the decorator of the Opera-house, as we believe we have already stated, the central dome is under his care.

To the right and left of the entrance to the machinery gallery are two groups, 10 mètres high, executed by MM. Chapu and Barrias, representing Steam and Electricity. Sculpture is elsewhere in the exhibition called upon to play an important part, and particularly in the pavilion of the Argentine Republic, which calls for special mention.

The Buenos Ayres Government were fortunate in choosing as their architect M. Albert Ballu, who, thanks to the ample resources placed at his disposal, has been able to give free play to his fancy and ingenuity. The building is rectangular, and will cover an area of 3,000 square mètres. It will be surmounted by five domes, the largest of which will be 32 mètres high. The façades, faced with coloured faience by the best makers, terminate in great angle pylons crowned with groups of celebrated persons by M. Ernest Barrias. A central group by M. Hugues is to decorate the principal front. MM. Felix Barrias and Roll have executed for this same front the cartoons for two great mosaic pictures representing, one a shepherd and his flock, and the other agriculture and cattle.

Internally, the ground floor of the building is lighted by a large stained-glass window representing the City of Paris welcoming the Argentine Republic, executed from the designs of M. Toché, the talented young artist who first became known through his decorations at the Château of Chenonceaux. To right and left of the grand staircase are two pictures by M. Duez, "Mining" and "Harvest." The decoration of the central dome is Persian in design. It is to be enriched with statues by MM. Camille Lefevre, Pepin, Turcan, and Charles Gauthier, representative of Art, Science, Commerce, and Agriculture.

The decoration of the smaller domes has been confided to the following artists:—In the first (the Arts), M. Jules Lefevre will paint "Architecture" and "Sculpture," and M. Hector Leroux Painting and Music. In the next (The Sciences), M. Olivier Merson will paint Physical Science and Chemistry, and M. Cormon Astronomy and Electricity. In the third dome (Agriculture), M. Tony Robert-Fleury will represent Fishing and Grazing, and M. Gaston Saint-Pierre Forestry and the Cultivation of the Sugar Cane. In the last dome (Commerce), MM. Albert Besnard and Gervex will paint Mining, Tanning, the Railroad, and Coach-building. The decoration of the central dome is to include an ornamental frieze by M. Ch. Lameire, who is also to paint sixteen portraits of Argentine politicians. Finally, the four spandrels will be treated by MM. Chancel and Faivre-Duffer, with paintings symbolical of Seed-time, Harvest, Navigation, and Commerce. This collection of works of art represents about 420,000 francs, and it will be seen from the list of names that this portion of the exhibition will comprise quite a compendium of modern French art.

M. Ballu has also built the "Algerian Palace" in the part of the exhibition allotted to the French Colonies upon the Esplanade des Invalides. This structure, surrounded by open porticos and dominated by an elegant minaret, is faced externally with coloured faïence, and has a very happy effect. Next to it is the Tunisian Palace erected by M. Saladin, and opposite is the monument put up by the War Office.

The statue of Shakspeare, lately illustrated in the *Builder*, was inaugurated on Oct. 1 at the corner of the Boulevard Haussmann and the Avenue de Messinè. As most of the London journals have described the ceremony, we will only mention that the effect of M. Paul Fournier's work is satisfactory, and that he was fortunate in having so tasteful an artist as M. Deglane to design the pedestal. It will be remembered that this young architect exhibited a fine restoration of the Palace of the Cæsars in the last Salon, and obtained on that occasion a medal of honour. M. Deglane has managed to combine in the pedestal for the Shakspeare statue great decorative simplicity with a rare elegance of outline. Besides the artistic interest of the occasion, it is pleasant to note this fresh mark of sympathy with English thought on the part of the Parisian public. We must, however, criticise the arrangement whereby the ceremony took place on a Sunday, resulting in the absence of Lord Lytton and the greater part of the British colony. It was a want of tact that might easily have been avoided by the Municipal Council.

Apropos of international sympathy, we must notice the offer which Mr. Maclane, the United States Minister, has just transmitted to the Paris Municipality in the name of a committee of Americans, presided over by Mr. Pulitzer, the editor of the New York *World*. It is proposed to present Paris with a monumental group in bronze of Washington and Lafayette. This work will be executed by the sculptor Bartholdi, the author of the celebrated colossal statue of Liberty, which now lights the roadstead of New York, and a small reproduction of which, presented by the American colony, will shortly decorate the Île des Cygnes. If, as there is every reason to believe, the Council accepts the offer of Mr. Pulitzer, the proposed group will be erected either on the Place Lafayette, or, better still, in the Place des États-Unis, in the middle of a quarter inhabited principally by the Americans.

The competitive sketches for the monument to the revolutionist Danton have been on view for some days, and by the time these lines appear the jury will, doubtless, have chosen the three artists who will be called upon to enter the final competition. Among the sixty-six competitors who have responded to the appeal of the Municipality are to be found a certain number of names known to the public. Our attention was principally drawn to the sketches of MM. Desca, Falguière, Berthet, Germain, and Auguste Paris. That of M. Desca, in particular, is distinguished by a piquante originality and great vigour. But, on the whole, the competition is poor enough; one can see that the artists were not inspired by their subject, and they appear to have racked their brains to produce ill-proportioned, heavy, and inelegant figures.

We must note in passing the approaching erection in the court of the "Observatoire" of the statue of Leverrier, the astronomer, which M. Chapu has just finished.

The École des Beaux Arts re-opened some weeks ago. The number of students entered in the several sections is about 1,200, that is to say, 400 in painting, 200 in sculpture, 20 in engraving, and 600 in architecture. In consequence of the death of Gustave Boulanger, whose place has to be filled one of these days by the superior council, the painting ateliers are provisionally reduced to two, those of MM. Cabanel and Gerôme. The three ateliers of sculpture are directed by MM. Cavelier, Falguière and Thomas. M. Henriquel Dupont, notwithstanding his great age, remains professor of copperplate engraving. M. Pouscarme directs the atelier of medal-cutting. As to architecture, there are three ateliers, overlooked by MM. André, Ginain, and Guadet. The exhibition of the "Envois de Rome" has just been opened at the École des Beaux Arts. Painting is there represented by a decorative composition by M. Baschet (fourth-year student), a canvas, by M. Puita (third year), "Tobias and the Angel"; also by a copy by the same artist of a portion of Raphael's "Miracle of Bolsena," and a "Lazarus," by M. Lebay (first year).

In sculpture, M. Lombard (fourth year) exhibits a fine group, "Judith and Holofernes." The bas-relief of M. Capellaro (first year) of "Amour and Psyche" is passable. The "Archer" of M. Gardet (second year) is really an imitation of the best works of M. Falguiere.

In the Section of Architecture we were much struck by the work of M. Redon (fourth year), who has made a restoration of the Temple of Heliopolis, Baalbec, in Syria, the ruins of which were so well described by Lamartine in his "Voyage en Orient." M d'Espony (third year) has sent "A Tomb at Pompeii" and a restoration of the Palazzo Linotta at Rome; M. André (third year) exhibits several restorations, among which the best are those of the Temple of Antoninus at Rome and of the Acropolis at Athens. Finally, M. Defrasse (first year) sends the Temple of Castor and Pollux at Cora.

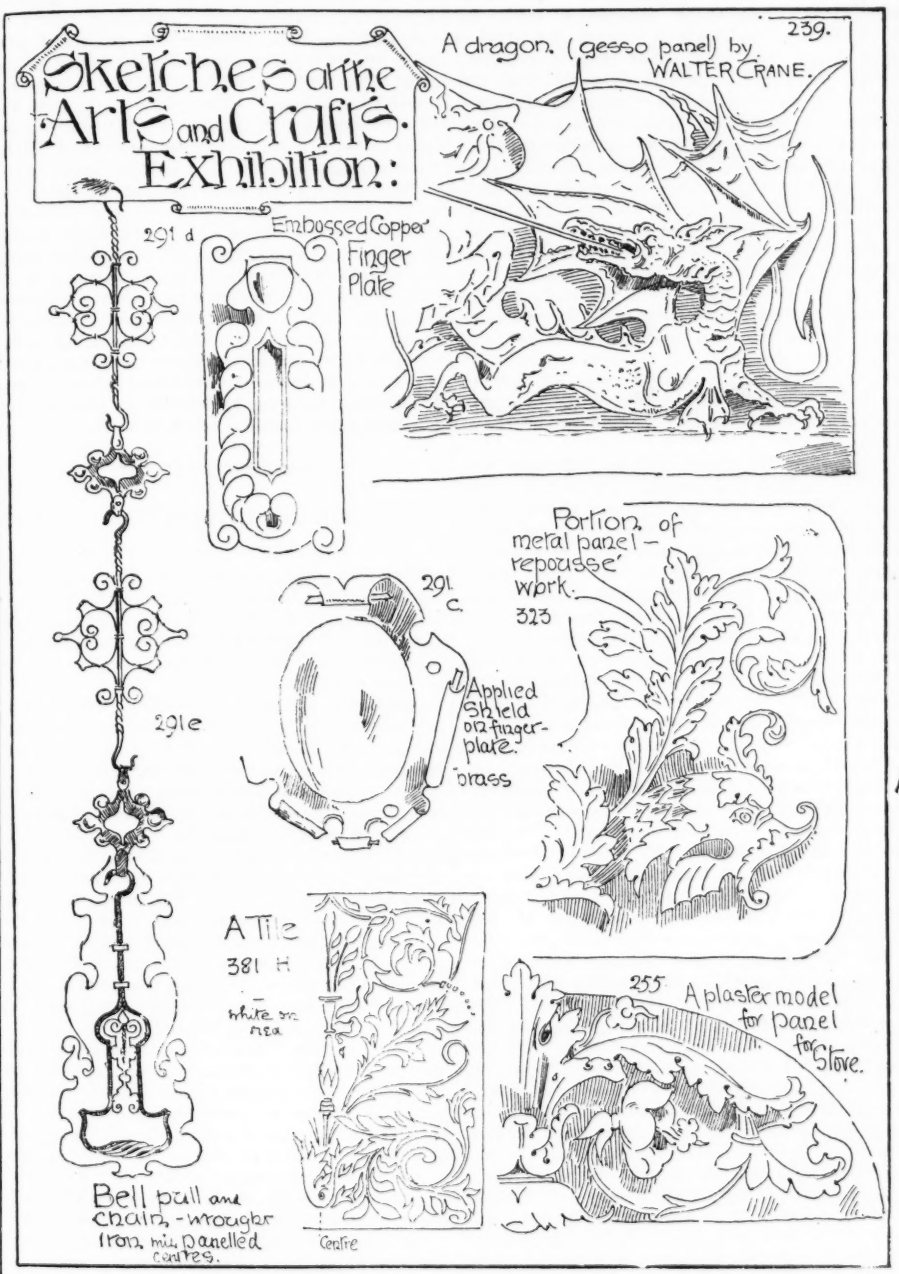
While speaking of the École des Beaux Arts, we must not forget to mention that the triennial prize founded by Henri Lehmann, the painter, for the encouragement of classical studies, will be awarded for the first time in 1889. The prize, which is worth 3,500 francs, is to be allotted to a painter, not above twenty-five years of age, who shall have executed, in the three years, a picture or cartoon which, in the terms of the gift, "protestera le plus éloquemment contre l'abaissement de l'art." Speaking of Classical art, the executors of M. Lehmann must not go to the Black and White Exhibition to recruit artists for their competition. But, if we are here far enough from the solemnity and stiff forms of academical composition, so dear to M. Lehmann, there is on the other hand an abundance of originality and spirit to regale the eyes of visitors to this new exhibition. In reality, in adding water-colours and pastels to the drawings and engravings, the meaning of the term black and white has been rather unduly stretched, but it is hard to find fault with an arrangement which allows one to see, along with the originals of the plates of all the great illustrated journals of Paris, a series of portraits, studies, and fancy sketches, signed by L'Hermitte, Allongé, Régamez, Jeannot, J. L. Brown, Willette, and Caran d'Ache. In fine, the success of this exhibition is much greater than that of the two last ones.

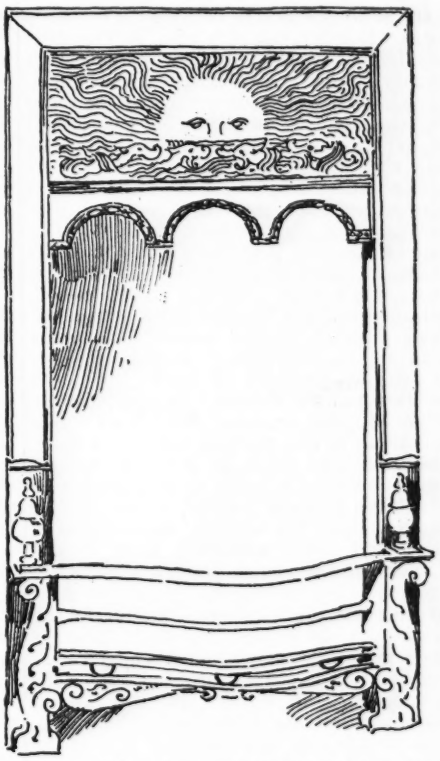
The site of the Tuileries and the rebuilding of the Opéra Comique are the two great questions of the day for the Minister of Fine Art. As to the first, the transformation will be easy, for the Post-office buildings and those occupied by the Préfecture of the Seine since 1879 have been completely demolished. A relatively small loan is spoken of, seeing that the garden will be very simply laid out, in anticipation of the still distant day when it may be decided to erect a monument on the site of the Royal palace. At present, this great space, the area of which is not less than ten acres, is transformed into the site of a fair, and the booths of mountebanks take the place of the monumental façades that used to terminate the vista of the Champs Elysées.

The Opéra Comique question threatens to be never ending. The Parliamentary Committee that has charge of the affair, in accord with the Ministry of Fine Art, has, it is true, decided upon the reconstruction of the theatre with a façade to the Boulevard; it had also decided upon a public competition, and M. Steenacker, who was unanimously nominated the assessor, had proposed to receive the designs upon December 31, to exhibit them in January, and to make the awards on February 1. But, at the last moment, the commission retracted its former vote, rejected the Government proposal, which was to confide the reconstruction of the theatre to the office of "Bâtiments civils," and now demands that there shall be two distinct competitions, one for the construction of the building and the other for financing it. There is thus a serious conflict with the Government, and, under the circumstances, unless an agreement can be arrived at, it is probable that the erection of a new Opéra Comique in Paris will have to be abandoned.

On the eve of the International Exhibition, which will inevitably increase the traffic in Paris in a notable degree, we cannot but applaud the action of M. Alphand, who has just decided upon the experiment of erecting an iron foot-bridge at the Montmartre cross-roads, well known by the suggestive name of the "Carrefour des écrasés." This structure, which has been so long talked about, will take the form of two bridges crossing one another, and will cost 22,000 francs. If the experiment is successful, such bridges will become general at other points in Paris, where the carriage traffic is most dangerous to foot-passengers.

We are also able to announce the approaching opening of the Galliera Museum, from which the hoardings are being removed. The railings surrounding the building, which extend as far as the Avenue du Trocadéro, are already in place, and M. Ginain, the architect, will soon commence the internal fittings required for the reception of the collection of works of art left by the Duchess de Galliera to the city of Paris. The monument to Admiral Coligny, too, of which we have spoken several times already, and the principal figure of which we have illustrated, is being actively pushed forward.


Sketches at the Arts and Crafts Exhibition:
239.
A dragon. (gesso panel) by WALTER CRANE.
291 d
Embossed Copper Finger Plate
291 c.
Applied Shield on finger-plate. brass
291 e
Portion of metal panel - repousse' work.
323
A Tile
381 H
white on red
255 A plaster model for panel for Stove.
Bell pull and chain, - wrought iron, with panelled centres.
Centre



A Grate by R.T. Blomfield.

BITS FROM THE ARTS AND CRAFTS EXHIBITION.

WE subjoin a few sketches of detail from various works in this Exhibition, including several which we have called special attention to previously. The numbers on the sketches refer to the numbering in the catalogue.

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17. Portion of a decorative panel in tiles by W. de Morgan.

49. Portion of a Leaf of a Folding Screen in oils on silvered & lacquered sheepskin.

GRESHAM COLLEGE.

In the address which he delivered at Gresham College on Monday, the 16th ulto., as President of the London Society for the Extension of University Teaching, Mr. Goschen dwelt upon the growing union between a comparatively new educational organisation and an old educational endowment. He represented how Gresham devised that scientific and literary instruction should be imparted to business men in London by learned academicians. In comparing that foundation with his own society, Mr. Goschen appeared to suggest that the wealthy financier and Antwerp trader was three centuries fully in advance of his time. During a long period, indeed, the founder's liberal-minded design had received, through various causes, little more than an empty, perfunctory accomplishment. It is not our province to fasten upon the Corporation and the Mercers' Company, in their capacity as joint trustees, the blame for a partial failure in the working out of the trust. This has rested, no doubt, as much with those who were unwilling to learn, as with those who were willing, however inaptly, to teach. Of late years, indeed, the lectures, rendered more available and more attractive, have drawn, within our own knowledge, better and certainly more appreciative audiences. No longer does the resplendent, cocked-hatted janitor, in the hall where the old statues are, tell the stranger who asks what goes on within, "Why, nothink goes on here at all—it's Gresham College." The lectures, delivered in a room that is somewhat bare and cheerless, are quite free to the public, who can always rely upon hearing expositions by accredited masters of their respective subjects.

The Greshams, to whom this at all events most well-intentioned foundation owes its origin, derived from a village of that name in Norfolk, five miles south-west from Cromer. A son of Sir Richard Gresham, chosen Lord Mayor in 1537, and his wife Audrey, who were buried in St. Lawrence Jewry, Thomas Gresham was born in the year 1519. On quitting what was then commonly styled Gonville Hall, Cambridge,* he was bound to his uncle, Sir John Gresham, merchant, who was elected Lord Mayor in 1547. Having married (1544) Anne, widow to William Read, mercer, and a native of Beccles, he made several journeys to Antwerp with his father, as "king's merchant" or "agent," for the negotiation of loans with the Fuggers, Schetz, and other large Flemish houses. There in December, 1551, he took up his abode, and continued in the service of Queens Mary and Elizabeth. The latter, in 1559, made him a knight, and appointed him ambassador to the Duchess of Parma in Belgium. Meanwhile, one Richard Clough managed the office in Lombard-street, by sign of "The Grasshopper." This is the sign whereof Pennant speaks as being owned in his day by the bankers Martin, at No. 68, on the site of Gresham's offices. "Was it mine," says he, "that honourable memorial of so great a predecessor should certainly receive the most ostentatious situation I could find." Now, by the courtesy of Mr. Martin, of the existing firm of Messrs. Martin & Co., we are enabled to state that his house carefully kept the sign that marked the business of Duncombe & Kent, bankers to James II., to which they succeeded. On the rebuilding of their premises in 1794, the grasshopper was laid by, but was not found again, and is supposed to have been stolen. The private parlour of the firm, recently built, stands over part of the ground which was occupied by Garraway's, in Change-alley.

Returning to England in March, 1561, Gresham, fearful of the plague, retired to his estate of Ringshall, near to Needham Market, in Suffolk, where was prepared some of the timber for his great Exchange. Three years later he acquired the sub-manor of Osterley, to which Elizabeth added that of Heston. He enclosed the park and built the house which the Queen visited in 1578. That house was rebuilt, upon the original plan, by the brothers Adam, for Robert Child, the banker at "The Marigold," Temple Bar, by the marriage of whose granddaughter Lady Sarah Fane to George, fifth Earl of Jersey, in 1804, it passed to his lordship's family. The park, lying between Hanwell Asylum and Heston, is within a mile of Southall railway-station. Five years previously Gresham had the honour, and expense, of entertaining his sovereign at Mayfield, Sussex, in what had been a palace of the archbishops of Canterbury, originally built by St. Dunstan, and which, some twenty-five years since, was converted into a convent. Having introduced radical changes into our financial system by raising loans to the state at home rather than abroad (1569), Gresham was made commissioner to examine into the conditions and rates of foreign exchanges, as well as into the municipal and domestic government of London. We may regard him, in short, as a brilliant successor to William de la Pole, the Lombard-street banker, and "dilectus mercator" of King Edward III. On January 23, 1571, the Queen, proceeding from Somerset House, dined with her "royal merchant" at his house in Bishopsgate-street, and thence went to his new Bourse, as built by Henryke, a Fleming, over the site of the old Tun Prison and other buildings on Cornhill, which she declared to be thenceforth the Royal Exchange.

Sir Thomas Gresham died in 1579, and was buried in St. Helen's Church. He had declared that, failing an heir, the Mercers and the Corporation should succeed to equal moieties of his profits in the Exchange, and of his property in Bishopsgate-street. And so it came about, though not with the ready accord of his widow, who opposed the probate of her husband's will, whereby, in addition to her own ample inheritance, she enjoyed a life-interest of the rentals derived from the various shops and stalls in what was termed the "pawn," around the upper floor of the Exchange. These then amounted to about 750*l.* a year. On Lady Gresham's death in 1596, the beneficiaries entered upon their inheritance, and in June of next year were begun, at Gresham's House, the lectures for which they were to provide professors. The courses extended to law, music, astronomy, geometry, physic, divinity, and rhetoric, the last being about equivalent to literature. To the lecturers were assigned rooms in the College, and a stipend of £50 a year apiece, afterwards increased to £100 in lieu of lodging. The trustees referred to Oxford and Cambridge Universities the nomination of the professors. Oxford named three at once; Cambridge, it is said, demurred for a while, taking it ill that the College had not been founded there. In the end, however, Cambridge appointed three others, and Elizabeth settled the difficulty as to the seventh professor by naming one who happened to be a member of the two Universities.

The best presentment of the College, as partly rebuilt in 1601, is Vertue's bird's-eye view, from the west, dated 1739. The greater court measured 110 ft. by 140 ft., the smaller (to the east)—in which was the "reading-hall"—36½ ft. by 63¼ ft. The Broad-street, or western, front was 208 ft. long, with a return, from the astronomy professor's lodgings at the northern corner, of 186 ft. In the upper floor of this front were the White Gallery and the law professor's lodgings, below these the almshouses founded by Gresham and since rebuilt for eight occupants, in the City Green-yard, Cripplegate Without. This print, being 14½ in. by 11¼ in., contains full reference to the professors' and other apartments. At the gate leading out of Broad-street into the stable-yard—which lay south of the great court—is depicted the termination of the historic duel between Drs. Mead and Woodward. Their dispute had its counterpart in the verbal passage-of-arms between Dr. Radcliffe and Kneller. These buildings were demolished by 1768, the site having been sold, for no more than a perpetual annuity of 500*l.*, to the Government, who utilised it for a new Excise Office, whereof W. Robinson was architect. The Excise removed hither from what had been Sir John Frederick's house, now site of Frederick's-place, Old Jewry. This latter Excise Office was pulled down in 1853, and the ground is now covered by a range of offices, by style of Gresham House. The lectures were transferred in 1768 to a room above the (second) Royal Exchange. After the destruction by fire of the latter on January 10, 1838, the present Gresham College was erected, from George Smith's designs, in Basinghall-street, and opened to the public on November 2, 1843. During this five years' interval, the lectures were delivered in the old City of London School. In the hall and beneath the staircase are some statues from Jarman's Royal Exchange. One is Sir Thomas Gresham, by Pierce; another is Charles II., which latter we take to be (whilst failing to obtain definite information on this point) the figure for which Gibbons had 500*l.* and, *teste* the *Gazette* of May, 1685, a patent to sell any engraving from it, "to be first seen at his lodgings in Great Piazza, Covent Garden." Hatton gives an amusing account, written in perfectly good faith and extending over several pages, "of the most remarkable Rarities in the Repository at Gresham College." These, in fact, formed the Royal Society's Museum, ranging in interest from Newton's reflecting telescope and Wren's "instrument wherewith to draw Perspective," to "a bone said to be taken out of the Maremaid's Head." The Royal Society, which originated in 1645, frequently held their weekly meetings in the College, and, after their incorporation in 1663, made it their permanent home,—though with a brief interval spent at Arundel House in 1666-7,—until they migrated to Crane-court, Fleet-street, in 1710. According to the report of a Royal Commission held some forty-six years ago, the annual value of trust property of Gresham College, as vested in the Mercers, was computed to be worth 6,000*l.*

* Strictly speaking, the Hall of the Annunciation of Blessed Mary the Virgin, under the foundation of Bishop Bateman, Gonville's executor. Dr. John Caius obtained his charter in 1558.

LIVERPOOL ARCHITECTURAL SOCIETY:

THE PRESIDENT'S ADDRESS.

The opening meeting of the forty-first session of the Liverpool Architectural Society was held on Monday evening last, at the Royal Institution, Colquitt-street, when the President, Mr. Edmund Kirby, F.R.I.B.A., read his opening address as follows:—

Although, speaking generally, architecture has not been in so much demand by the public, and correspondingly the work of the architect has not, as much as we might have desired, been called into its active service, still, in opening the forty-first session of this Society, it is satisfactory to observe from the annual Report of the Council the pleasing facts that the average attendance at our meetings last session has been more numerous than the previous one by about half as much again, and that the roll of our members, as compared with that of previous sessions, also shows a satisfactory increase, after making allowances for the occurrence of the ordinary lapses which follow societies by resignations and through death.

The late Mr. Sherlock has already been lamented by this Society. In Mr. T. B. Crosse we have lost a gentleman who showed much practical interest in our welfare; and by Mr. M. H. Bloxam's death, the archæological world has lost one of the last of that small but able band of pioneers, now passing away, who, some fifty or sixty years ago, with a sure, careful, and learned method, unearthed the neglected beauties of the national architecture of this country. Luckily, their work lives in the books and in the papers they have published, and as time goes on these will become every day more and more valuable, as authorities to which we can refer with pleasure and with interest. At the period when writers of Mr. Bloxam's type flourished, the antiquities of this or that old church, mansion, or castle were the chief objects of research and discussion. In fact, precedent was the standard on which criticism was measured. Hence the source from which the architect of that day derived the influence which formed his style. And, following on these lines, he so scupulously modelled his designs as to be able, if challenged, to explain by chapter and verse his authorities from some old work or other for every form of feature or variety in the turn of a moulding. The care and study induced by such practice must have given an excellent grounding to such early training. It must be confessed, however, that in many instances the final result terminated in the dullest monotony; since the lack of inherent inspiration in the individual translator naturally left his productions a lifeless mass of dry bones. Still, experience has proved, especially in those architects who have been the shining lights of the revival, that not only did they carefully follow and study the precepts of the old work, but when they designed they also produced the best, but also the most original creations.

Nowadays we are apt to smile at the careful drudgery which the pursuit of archæological precedent entailed on our immediate predecessors. Changed conditions and the every-day development of travelling are evolving a new state of affairs architectural, which would astonish the practitioners of thirty or forty years ago, could they but again revisit us. Since their days how much have we not gained by the advantages industry has laid latterly at our feet? Let us, as we are now moving towards the last decade of this remarkable

century, pay a visit to the Liverpool Free Library, and make an inspection of the magnificent collection of architectural books and drawings there awaiting us, and filled with the illustrations and researches of authors gathered from all the divisions of the globe. From the innumerable data which they are ready to disclose, we can raise the veil, behind which may be discovered the hidden secrets held by the art of every clime.

With all this wealth of authority and information before us, is it too much to hope that the immediate future will develop those who, by patient and laborious study, and by the following of the true principles which led the men of olden days, may yet live to produce in a modern garb works aspiring to equal the glories and triumphs of former times?

The eagerness with which we nowadays jump into practice, the rapidity with which designs must be turned out of an office, naturally restrain the student from drinking at the fountain-head of the grand works of antiquity, and forces him to fly to the fugitive illustrations in the architectural papers for here a bit and there a bit (as a milliner would do for a costume in a lady's journal) in order to secure the most fashionable phase of a chimney, ingle-nook, window, or any material which happens to be in vogue for the day. What is the consequence? Not only do we find the same chimneys and other popular features in different parts of our own neighbourhood; but we may travel from north to south, or east to west, throughout the land, and discover in every town or its district similar diluted plagiarisms.

In these remarks no criticism is presumed to be passed on any particular architect's work whose style may happen to be the rage, excepting a passing word on this,—that beautiful as so many designs may be, still, in my opinion, if it were possible for one particularly well-known artist to make a bad design, his draughtsmanship is so wonderful that the wave of his pencil seems to have the charm of turning dross into gold, and a debased curve into a pleasant line; but that does not say that *we* can do it, or that the art is true which is so gifted.

As I have previously remarked, the man who studies most patiently becomes, as a designer, the most original. And it cannot be too strongly urged and impressed that any new and vigorous development in style, to which we may look forward in the future, must be the result of individual research.

The clever "Queen Anne" men have proved this. True originality and freshness will be acquired only by becoming what they themselves were,—ardent students of the ancient models,—and that by the dint of close application and diligent draughtsmanship. In a presidential address one can but tread upon the skirts of a subject of such moment and interest to the advancement of true architectural art. Its importance and the large area it covers suggest its being pursued in a form more definite and of greater comprehensiveness than a fugitive notice can afford to it. Perhaps, in the lectures, &c., to be delivered at the coming Art Congress, we may hear of something that may bear on the question of modern design from some of the promised speakers.

At the Walker Art Gallery, on the evening of Monday, December 3rd, Sir Frederick Leighton, as President, will open the Congress with an address. Then, the following morning of Tuesday will be occupied by an address relating to the Section of Architecture, by Professor Aitchison, A.R.A., from which, naturally, we, as architects, may expect our principal pleasure and most attractive interest. Nor can our sympathies be shut out from the address on Wednesday morning by Mr. Walter Crane, on a subject over which our control is potent, viz., the applied arts. Nor again, should we, whose discussions have so lately dwelt upon the art of sculpture and its application to our public buildings, miss the opportunity that Wednesday afternoon offers in hearing from Mr. Alfred Gilbert, A.R.A., his views upon that branch of art in which esteem holds him up so highly as a sculptor of great promise. On Tuesday afternoon, and on the mornings of Thursday and Friday, addresses of general artistic interest, though not so particularly appertaining to architecture, will be given with reference to,—(1) "Painting," (2) "Art History and Museums," (3) "The National and Municipal Encouragement of Art,"—respectively by Messrs. Alma Tadema, R.A., Sidney Colvin, and the Right Hon. A. J. Mundella, M.P. I must not forget that it is hoped that our Society will be represented during these addresses. There are several amongst us whose voices will be heard with welcome, and, I am sure, their arguments will not only add to the interest of the discussions which follow the papers that are read, but will be the means of enriching them. We must not overlook the fact that it is by the invitation of the City of Liverpool that the first Art Congress is being held in our midst. No citizen can seriously read the prospectus which announces the programme without feeling himself in harmony with the intentions it formulates for the general good. How much more, then, should architects take full advantage of the coming discussions by practically attending them, and listening to the words of wisdom and experience which are brought to their very doors, not only by the choicest lecturers in painting, sculpture, and architecture which the Royal Academy can afford, but by others equally gifted in the sections over which they will preside? Provincial architects now have an opportunity of brushing away any local insularity, and of broadening their higher sympathies by seizing this present opportunity, so as to be in a position by which they can discuss and be in touch with the chief artistic and architectural questions now brought uppermost in Metropolitan art circles by the flow and progress of events, commercial and artistic. The inherent beauty and interest which always attach themselves more or less to the objects of architectural art are sufficiently attractive to the sincere student as to require no additional words of mine to offer further inducements to arouse attention and enthusiasm in their pursuit.

Whilst bringing its claims before your notice, I must remark that had there been no Art Congress, some of the addresses you will possibly hear there would in all probability have been delivered within these walls. Hence, during this session, I fear we must not expect the same numbers of papers as were given during the last one. However, I am happy to say that Sir James Picton, whose wonderful vigour and energy commands our admiration, has very kindly promised a paper on the interesting subject of "The Various Town Halls of Liverpool." The meeting for this paper will be held (not in the Town Hall, as stated in the annual proceedings), but at the Free Library, on an evening later to be fixed, and where, through the kindness of Sir James, the members are invited to partake of his hospitality. In February, Mr. James N. Shoolbred, C.E., one of the principal authorities on electric lighting, will give a paper on that subject, with especial reference to its connexion with and its application to commercial and domestic purposes.

Whilst on the question of papers, it will be interesting to quote for your consideration a judgment given in a local court of law, referring to the "Corporation leaseholds," a question which you will remember as being so ably treated in our first paper, read at the beginning of the year by Mr. J. W. Davidson. Arguing from precedents, it was pointed out then, and, subsequently, at various meetings of leaseholders, and also before the Select Committee on Town Holdings, that although there was no covenant on the part of the Corporation to renew their leases, yet the original intention of the Liverpool Corporation lease was grounded on the understanding that the Corporation would not refuse, when called upon to do so, to renew the lease, and the practice had been invariably to renew on the terms advertised, which terms were produced at auction of Corporation property.

Now, last August, at the Chancery Court, St. George's Hall,—in the Royal Infirmary Light Case, "Martin *v.* Brocklebank,"—the question of the renewal of a Corporation lease was brought before Vice-Chancellor Bristowe, who then decided and laid down that the Corporation could refuse the renewal of a lease, and that they had a perfect right to do so. I call your attention to this particularly with reference to the interest it has on the valuation of property.

In the retrospect of recent events I must not omit to mention that in June last a crowded and representative meeting of the Masters and operative members of the local plumbing trade was held in the Free Library, under the chairmanship of the Master of the Worshipful Company of Plumbers, London. The meeting was also attended by several professional members of this society. Not only this society, but the public generally, must recognise with satisfaction the establishment by the Plumbers' Company of London of a local Committee for the conduct of examinations for the registration of plumbers for the district around Liverpool.

Besides improved sanitary science in the department of plumbing, I think we may look forward to a better state of things in the construction of the public sewers; and if these improvements conld include a comprehensive system of sewer ventilation, the Medical Officer of Health's periodical reports on the public health would, by their diminished averages, give pleasure to himself and much satisfaction to the inhabitants generally. It must be admitted that Liverpool is no worse in this respect than the generality of other towns; but inquests which have been held during the last two or three years in Birkenhead, Widnes, and, I believe, Liverpool, have shown that suffocation from sewer-gas has been the cause of death to workmen connected with this branch of work, and it has been proved at the same time that the fatal gas is still floating about the sewers in large and dangerous quantities without adequate means for its proper escape and safe removal away from the streets and the homes of the population.

In looking forward to the future, the federation of this Society with the Royal Institute of British Architects must be regarded as a step of much importance and advantage to the Society. There can be no question as to the position the Institute holds as the only body to which the architectural world looks as the centre of professional fellowship. No doubt there are other younger and excellent societies in London doing good work. Nevertheless, it is the Institute which enjoys the Royal Charter, dispenses the Royal Gold Medal and the various prizes which are connected with some of the most honoured names of the profession. Whilst we shall retain our own independence, the advantages gained by the new alliance are several, amongst them being that members of local societies who are also members of the Institute can deduct the sum of their local from their Institute subscriptions. The library and rooms of the Royal Institute of British Architects are open to all members of this and other societies who happen to be affiliated with it. We gain an interest in the management by the election—if he be a Fellow—of your President to the Council of the Institute.

There is one point respecting this movement for alliance which I think you will agree to be of importance, that is, in case (as it may sometimes happen) that the course of one's general practice should not run smoothly, then, being all members of the same body, the whole strength and experience of the profession will be at our command, and whatever help and assistance that may be found necessary will be willingly afforded to us.

In connexion with the Royal Institute, you will see in the public prints that this Society will conduct an Examination in Architecture during the week commencing February 25th, 1889. It will be held in Liverpool for the convenience of gentlemen living in the district, and I trust that as many students as possible will seriously appreciate the great advantages now brought to them, and present themselves for examination. Besides gaining the honour of passing the Examination, those who are successful will be eligible for the Associateship of the Institute,—now a title of much value, as its stamp upon those who receive it at once guarantees their proficiency to their brothers, and to the public, as men upon whom professional reliance may be placed with safety. I congratulate the Society on having arranged this Examination for the convenience of the Liverpool district; and I may say, no better honorary local secretary could be found than Mr. Alfred Culshaw. At his office, 3, Union-court, I am sure students will find all necessary information. Some may desire preliminary knowledge, and it may be here observed that all this is comprised in the small pamphlet published by the Institute, called "The Examination in Architecture." In it may be found the regulations, programme, and advice to candidates with respect to books, &c., for professional reference and study. There is another small book, issued in 1888 by the Manchester Society of Architects, which I can strongly recommend as a guide to a course of study preparatory to, or in connexion with, these examinations. The librarian of the Free Library has written to say that nearly every book recommended for study by the Royal Institute is in that magnificent collection. Mr. Cowell, the librarian, has been good enough to offer a separate table in his room at the Free Library for the use of those students whose names are entered for this examination. When the candidates get the Examination guides, with list of reference-

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books, it would be well to suggest the filling-in,—opposite their titles,—of the numbers and class letters which those books have prefixed to them in the Free Library catalogue. This will save much time in case of reference. It may be further added that those who are pressed for time can acquire the services of gentlemen who are acquainted with the routine of instruction requisite for this Examination.

As far as the helps to education which this Society affords, I had hopes that in the Class of Design more students would have availed themselves of the opportunity of joining it. After 150 circulars had been sent out to various offices in the town and district, it does seem strange that the response brought back but seven members who sent in competitive designs. I commend this fact to the notice of those who complain about the difficulty of getting gentlemen in practice to attend to the classes. I have read some recent correspondence about these classes, but I must remind our friends that classes in societies like ours, as at present constituted, cannot have the same advantage to the student as those to which paid lecturers are attached. Even the President of the London Architectural Association, in his recent opening address, complains of a falling-off in the attendance at the class meetings. A gentleman, an Associate, has also addressed me on the constitution of the Council, advocating that a proportion of Associates should be allowed to sit as members of the Council. Although this proposal deserves every consideration, I fear this is hardly the time nor the place for its discussion. I heartily sympathise with the interest and zeal which prompt these communications, and I shall lay them before the Council, who in their turn will, I am sure, take them into the serious consideration which they are now giving to the remodelling of the laws which at present govern the Society. On this subject various ideas have been suggested to the Council—one being that Liverpool should imitate Manchester, and have an architectural society, consisting alone of practising architects of a certain standing, leaving the classes to be absorbed in an Architectural Association in combination with the junior members of the profession. However, this at present is merely a dream; but I can say truly that the question of the advancement of the Society is constantly kept before my serious thoughts, and any help I can give to it—and through it to the support of the dignity of the profession, and of the greatest use and assistance to the whole of its members—shall be rendered with all possible pleasure.

In proposing a vote of thanks, Mr. W. H. Hay congratulated the chairman on his interesting address, and suggested it should be printed and circulated amongst the members of the Society.

Mr. T. Cook, in seconding the vote of thanks, touched upon some of the points referred to by the president, amongst which was the question of the right of the Corporation to refuse the renewal of their leases, and the question of sewer ventilation.

Mr. Aldridge, Mr. W. Parslow, and Mr. Mercer all spoke in support of the vote of thanks, which was carried unanimously.

New Town-hall and Municipal Buildings, Middlesbrough.—We are informed that the Prince of Wales has consented to visit Middlesbrough in January, for the purpose of opening these buildings, which have been erected from the designs of Mr. G. Gordon Hoskins, F.R.I.B.A., at an estimated cost of 120,000*l*.

RUSHTON HALL.

THE accompanying sketch of this old Hall is given in connexion with our article on the Weldon Stone District in the last number of the *Builder*,—Rushton Hall having been one of the buildings visited, and specially described on the occasion (see p. 297, *ante*).

Illustrations.

FIRST PREMIATED DESIGN FOR MUNICIPAL OFFICES, BOMBAY.

WE give this week reproductions of the two large elevation drawings of Mr. Chisholm's design for the New Municipal Offices, Bombay, which received the first premium in the competition, although, owing to some local tactics concerning which we are hardly in a position to form an independent opinion, his design was ultimately shelved. As no one seems to deny the fact that the design did receive the first premium in an open and regular manner, it is difficult to avoid the conclusion that Mr. Chisholm has not had fair treatment.

The drawings here illustrated were hung in the Royal Academy Exhibition, and we made some criticism on them in reviewing the exhibition, to which Mr. Chisholm, in a letter which was printed in the *Builder* of July 14 this year, objected, as not fairly representing the relation of his design to ancient Hindû work. We now give his expression of his intentions in his design, as taken from the report sent in with the design, a copy of which he has forwarded to us:—

"As the author proposes to adopt a modification of an Eastern phase of art, it may not be out of place to glance briefly at the history of the most remarkable works of Indian Architecture.

In the ancient buildings of Guzerat, Kattywar, and the North-Western Provinces, both religious and civil, we have an art pecfect for the purposes for which it was designed, true in principle, exquisite in form, and in the author's opinion, second to no art in the world but that of Ancient Greece. Indian art, like all perfect phases of art, possesses these attributes by virtue of its slow growth, that process which alone admits of the careful selection and rejection of forms by thousands of workmen, patiently toiling on fixed principles for hundreds of years. In early days this art, like most others, was purely religious. When the Mahomedans conquered the country, they were so struck with the exquisite beauty of the Jaina works that they pulled down temples, not to destroy them, but to build them up again piece by piece according to their own fancy; thus, aided by the hands of the same cunning craftsmen, a flexibility was infused into these works which they could not have gained otherwise. New forms sprung up with new requirements, to be adorned by the wealth of ornament perfected by the Jains. They, in their turn, were quick to perceive and adopt in their own works the picturesque phases of Mahomedan art, and thus the two styles became naturally and permanently blended. Later on, in the marble works of Upper India, Italian and Western forms of art began to overlay the pure styles; sound building principles gave way to mere picturesqueness, until, in such a building as the Taj at Agra, we have a stupendous jewel in which both architectural truth and skill are lost amid considerations of costliness and effect.

In the design submitted, the author has selected Hindû of a very pure type, merely adding such Mahomedan forms as expediency demanded in positions duly sanctioned by usage. With regard to details, the enthusiastic admirer of old work will be grieved to find many familiar forms omitted or pared down so as to be scarcely recognisable; but this, alas, is inevitable. It would be impossible in these days, and, indeed, scarcely desirable to reproduce archæological specimens of old work; at the same time, the author has endeavoured to grasp the spirit of the past, and to work, not indeed as the old giants worked, but rather as they would have worked now, beset with nineteenth-century difficulties.

In both Greek and Hindû architecture, the simple trabeated form of verandah at once affords the maximum of light, air, and shade. It is not improbable that the addition of the sunshade to every entablature would have been adopted by a Greek architect practising in India; this would have led naturally to other modifications. A comparison of the two sections of verandah is extremely interesting. Whether the two have had a common origin is probably now beyond the reach of investigation; but that the two can be mixed to produce sublime effects is proved beyond doubt by the most remarkable building of this century, the new Courts of Justice in Brussels, where we find a European architect earnestly studying the works of the Hindoos, and introducing wholesale Hindû features into Greek art with acknowledged fine effect. It is curious to see this wealth of art, these mines of genius so neglected in their own country. While paying a tribute of gratitude to the eminent architects who have done so much to adorn and beautify Bombay, and who are engaged in forcing so successfully the growth of a northern plant, it may be noted that the present occasion seems peculiarly fitted to turn a kindly eye on the luxuriousness of the tropical glories which surround us.

The author would, of course, concede to the Gothic and Renaissance styles (in suitable climates) a power of expression and refinement of detail unknown to Hindoo art, the result of a more energetic and exhausting process of rejection and selection; but these styles modified to suit an Indian climate are seldom more than skin deep. We have generally a screen work of construction before the building proper; and if this cage or shell were to be stripped off, in many cases we should discover a kernel out of keeping with its shell and not always architectural. This difference between the nut and the shell invariably receives emphasis by incongruous roofing, flat or pitched as expediency demands. Hindû architecture, on the other hand, naturally possesses the continuity of indigenous art, and the external walls by means of the exquisite *jalli* work, peculiar to the style, may be made to possess any degree of solidity from the slender tall columns entirely open to the elaborately perforated wall."

We give this as an exposition of Mr. Chisholm's own views in regard to the adoption of indigenous Indian styles for modern Anglo-Indian buildings. Our own opinion on the subject we have given on another page.

DESIGN FOR STAINED GLASS, ALDINGTON CHURCH, KENT.

THE design for stained glass which we illustrate is from the cartoon for one light of a two-light window, designed by Messrs. Shrigley & Hunt, for Aldington Church, under the supervision of Mr. Reginald T. Blomfield, as architect.

In general idea, and in the manner in which the wings of the angel are used to form a rich background to the figure, the design undoubtedly owes a good deal to the influence of Mr. Burne-Jones, though not in the character of the head.

The original drawing, a large-sized cartoon, was exhibited in the Royal Academy this year.

The Arts and Crafts Exhibition Society have sent us the following syllabus of lectures in connexion with the Arts and Crafts Exhibition now open, to be given in the new Gallery, on Thursday evenings in November, at 8.30 p.m.:—Thursday, November 1, "Tapestry and Carpet Weaving," by Mr. William Morris. Thursday, November 8, "Modelling and Sculpture," by Mr. George Simonds. Thursday, November 15, "Letterpress Printing," by Mr. Emery Walker. Thursday, November 22, "Bookbinding," by Mr. T. J. Cobden-Sanderson. Thursday, November 29, "Design" and Presidential Address, by Mr. Walter Crane. The object of the lectures, we are informed, is two-fold:—(1) to set out the aims of the society, and (2), by demonstration and otherwise, to direct attention to the processes employed in the arts and crafts, and so to lay a foundation for a just appreciation both of the processes themselves and of their importance as methods of expression in design. The lectures will be given in the North Gallery, and after each lecture all the galleries will be thrown open, and will remain open till 11 p.m. Admission will be by ticket. For the admission of workers in any art or craft, tickets, to be filled in with the name, address, and art or craft of the worker, will be issued at 1s. each, or twenty-five for 20s., each entitling to admission to a single lecture.

THE IRONMONGERS' COMPANY.

In accordance with ancient custom, the Yeomanry of the Worshipful Company of Ironmongers,—one of the twelve great Livery Guilds,—held their St. Luke's day meeting in the Alabaster Hall of the London Tavern, Fenchurch-street. The Warden of the Yeomanry, Mr. T. C. Noble, presided, and invited the meeting to hear from him a few particulars about the origin, history, and constitution of the Company. In order to further illustrate the subject, a large number of valuable and curious manuscripts, documentary autographs, prints, drawings, and books, were exhibited by Mr. Noble, who gave a brief description of each article, more or less commenting upon its particular rarity or its connexion with their history, dividing his discourse into two parts,—the general history of the Guild, and the particular history of the Yeomanry.

The earliest notice of the Ironmongers, as a Company, dated back to the year 1351, although City apprentices could be traced back much earlier. The members of the Guild congregated in the neighbourhood of Cheapside and Old Jewry, hence the name of Ironmonger-lane still existing. In 1455, their arms were granted them, as shown in the framed picture and a facsimile of the original document. The supporters to the coat were not adopted until long after, and these, it would be noticed, were like their crest, two lizards, which, rightly or wrongly, were supposed to eat red-hot iron, and easily digest the morsel. The site of their present hall was acquired by the Company in 1457, and in 1494 there is a record of "Payd for a kylcherkyn of good ale whiche was drunkyn in the Yrynmongers' Hall, all chargs born 12s. 2d." The Hall was rebuilt in 1587, and happily escaped destruction in the Great Fire of 1666, although the surrounding buildings were destroyed. The present Hall was erected early in the last century, and was opened in February, 1750. It was redecorated in papier-mâché in 1847. Among the pictures exhibited by Mr, Noble, were views of the old Hall, a view of Old Fenchurch-street 100 years ago, showing the Hall on one side of the then almost deserted thoroughfare, and immediately facing on the other side the old King's Head tavern, the site of the present magnificent building in which they were then assembled.

The Ironmongers were incorporated by charter in 1463, an emblazoned facsimile of which was exhibited, Mr. Noble remarking that the ancient dress of a liveryman might be seen painted in the Leathersellers' charter of 1444, and the Barber Surgeons' picture of the time of Henry VIII. Some of the old wills of Ironmongers had curious bequests, and of these he had collected together a large number. Robert Byfield, in 1482, directed that sixteen torches and four tapers were to be carried by twenty poor men at his burial, and each was to have fourpence for his trouble. Alderman Thomas Breton, in 1485, after providing that masses were to be said for his soul, his wife's soul, his relatives', and all Christian souls, for ever, "the feloeship of Iremongers" were to keep sacred the day of his death for twenty years, and to have four score marks for their trouble. Henry Nevell, exactly 400 years ago (his will is dated October 14, 1488, and was proved August 2, 1489) desired to be buried in St. Botolph's Churchyard, and left 6s. 8d. as an offering "in dischardge of my soule." Alderman Richard Chamberlyn, in 1563, was good enough to give to his brother Ironmongers £50, "to helpe them oute of debte." Another alderman, Richard Gray, in October, 1515, left the Company £500 to perform trusts, which, no doubt, were faithfully fulfilled. John Hudson, in 1513, gave to Roger Smyth twelve pence, "prayyng you to remember my soule and the soulls that I am bounde to pray for." Sir William Denham (1558), Sheriff of London, 1534, and many years Master of the Company, left his estates to the guild, saying, "which I was myndyd the Yremongers shoulld have, and all the resydue in London and all Englond or ells wher." Alderman Dane, in 1573, left money for loans to young freemen of the Company, and his widow, Margaret Dane, six years later increased the benefaction; and also, amongst other bequests, bequeathed to the poor of the twenty-four city wards, "at the best hand, 12,000 faggots everie yere for ever," not, as has been often stated by sensational writers, to burn heretics with, but simply to provide the poor people with a fire to warm themselves when hunger and poverty stared them in the face. Her bequests are still faithfully administered, under a Chancery scheme obtained by the Company fifty years ago. About the year 1515, Mr. John Guyva made the Company a present of their funeral pall, or "herse-cloth," formerly used at the burial of members from the Hall, and which will be found described and illustrated in the "Ironmongers' Exhibition Catalogue" (page 454).

As interesting just now, Mr. Noble mentioned that the earliest-recorded Lord Mayor's Show of the Company was that of Sir Christopher Draper, in 1566, and among the craftsmen then engaged were names like those of members at the present time. When Sir James Cambell had his show in 1629 there were mermen and mermaids, an "ostridge," and among other sights was a forge exhibiting Vulcan hard at work, in his leather apron, plying his hammer at the anvil, amidst the flashing of lightning and the rolling of thunder! He (Mr. Noble) referred his audience to the late Mr. John Nicholl's work for a further account of the Lord Mayor's day of those times.

We understand that it is the intention of Mr. Noble to compile a new history of the Ironmonger's Company, which will also form a record of the progress of the ancient City Guild from earliest times. Mr. Noble has for the last quarter of a century been collecting from records, wills, and private sources, a large number of hitherto unknown details.

A GERMAN TECHNOLOGIST'S VIEW OF SEWAGE IRRIGATION.

Dr. J. Ruff, the Editor of the *Gesundheit*, the well-known organ, in Germany, for the advancement of the public health, writing from Stuttgart under date Oct. 20, in reference to a letter recently addressed by Dr. Drysdale to Mr. Charles Hancock (in which Dr. Drysdale says that "Dr. A. Müller has advanced nothing,—see *Builder*, of Oct. 6,—which can invalidate the opinion expressed by Dr. Koch as to the purity of the effluent from the Berlin sewage-farms and its freedom from noxious germs"), says, "I would refer your correspondent to what Dr. Koch himself has said at the recent annual meeting, held at Frankfort, of the *German Association for the Advancement of the Public Health* (Deütscher Verein für Gesundheitspflege). He (Dr. Koch) spoke as follows:—'*Even the best of processes at present in use, namely, sewage irrigation, does not attain—even in most favourable circumstances—the objects it is desired to secure.** And for this reason. Whenever there is a stronger rainfall than usual, large masses of *non*-disinfected matter, more especially fæcal matter, must be carried down to the public water-courses through the storm-water overflows (Noth-auslässe).'

"On the subject of clarified water" (Dr. Ruff goes on) "another speaker at the meeting,—I refer to the Town's Architectural Councillor, Herr Bockelberg, of Hanover,—expressed himself in the following way:—'We must not deceive ourselves. The clarified water is, no doubt, clear outwardly speaking, *i.e.*, apparently so, as far as the eye can judge of it, but not in reality, for even after clarification it is still in a dangerous condition for potable purposes.' If (concludes Dr. Ruff) the ardent advocates of sewage irrigation can express themselves in this way, you will quite understand that we who are opponents of the main drainage and sewage irrigation cannot but judge of this system even in a more deprecatory way,—one of our grounds for rejecting it being the waste that obtains of the exceedingly valuable manurial ingredients the sewage contains."

Mr. Hancock, in forwarding this translation, encloses a resolution which was passed by a very large majority at a meeting of the society named, on the motion of Herr Bockelberg, and which was in the following terms:—

"That the society recognises with great interest that progress has been made in the artificial purification of sewage, but remains of opinion that not any single one of these artificial arrangements has proved satisfactory—the important question in particular of the disposal of the sludge not having yet been solved, while the cost of the arrangements referred to is still exceedingly high."†

Builders' Benevolent Institution.—The annual dinner in aid of the funds of this Institution, will be held at Carpenters' Hall, London-wall, on Thursday, the 29th inst.

* The italics are Dr. Ruff's.

† Translated from the current number of the *Gesundheits-Ingenieur*.

ASSOCIATION OF MUNICIPAL AND SANITARY ENGINEERS AND SURVEYORS:

Examinations.

The sixth voluntary pass examination of candidates for the offices of Municipal Engineers and Surveyors to Local Boards, carried out by this Association, was held at the Institution of Civil Engineers on Friday and Saturday, the 26th and 27th October. Ten candidates presented themselves for examination, the written portion of which was mostly taken on the first day. The greater portion of the second day was devoted to the *vivâ voce* portion of the examination.

The examiners were—(1.) For Engineering as applied to Municipal Work, Mr. H. Percy Boulnois, M.Inst.C.E. (Borough Engineer, Portsmouth), Vice-President of the Association, and Superintending Examiner. (2.) For Building Construction, Mr. Clement Dunscombe, M.A., M.Inst. C.E. (City Engineer, Liverpool), Member of Council. (3.) For Sanitary Science, Mr. Lewis Angell, M.Inst.C.E., F.R.I.B.A. (Borough Engineer, West Ham), Past President. (4.) For Public Health Law, Mr. Charles Jones, A.-M.Inst.C.E. (Surveyor to the Local Board, Ealing, W.), Past President.

We give the written questions (which of course are varied at each examination) in each subject:—

Engineering as Applied to Municipal Work.

1. *Surveying.*—(*a*) How would you measure the distance of an inaccessible point with the chain only? (*b*) Describe the method of setting out a right angle with a chain.

2. Explain the "Wells" system for measuring distances with an ordinary dumpy level without the aid of a chain or tape.

3. *Levelling.*—A sewer has a fall of 1 in 375·75, the reduced level at its lower end is—2·05; what would be the reduced level at a distance of 300 yards up the gradient?

4. *Hydraulics.*—What velocity constitutes a self-cleansing flow in a 12-in. pipe sewer? What gradient is necessary to effect this with the sewer running half full, and what proportion does the diameter of sewer bear to its velocity of flow?

5. Describe the process of gauging the flow of water through the V notch.

6. *Drainage and Sewerage.*—Give the essential requisites for a good system of house drainage. Make a sketch of an intercepting-trap with manhole and fresh-air inlet, &c.

7. Describe the precautions that are necessary in the selection of a sea outfall. What are the disadvantages of tide-locked sewers, and how can they be remedied?

8. *Water Supply.*—Give a sketch section of an ordinary sand-filter bed for a town water supply of about 30,000 inhabitants, and state how many square yards of filtering area are necessary, and the rate at which the water should pass through the filter.

9. Describe a "Positive Meter," "Ball Hydrant," "Straight" and "Bent Ferrule," "Ground Stop-Cock," "Bib-Cock," "Ball-Cock," "Back-Pressure Valve," and "Safety Valve."

10. *Road-Making.*—(*a*) What contour would you give to a macadamised roadway? (*b*) What cross fall to the foot-walks if paved with asphalte? (*c*) What proportionate width should footpaths bear to roadways? (*d*) What proportionate width should the paved channel bear to a macadamised roadway?

11. Give a sketch section of a kerb, channel, and trapped gully-pit.

12. Give a list of the principal materials which can be used for paving footpaths, and state which you prefer, and your reasons for such preference.

Building Construction, &c.

1. State briefly the general principles to be observed in building with stone and with brick to ensure good work.

2. Describe the following classes of Stone Masonry: Ashlar, Block-in Course, Coursed Rubble, and Common Rubble.

3. What is the difference between coniferous and non-coniferous timber? Classify each, and give examples, and state the respective purposes for which each description is most suitable.

4. State at what age of maturity the following trees attain their greatest strength and durability, viz., Oak, Ash, Elm, Larch, and Fir, the best season for felling them; and the modes adopted for seasoning timber.

5. Describe shortly, and illustrate by a sketch, how you would shore up a dangerous building, 50 ft. in height, fronting a main thoroughfare, and having a frontage thereto of 30 ft., assuming that the front wall is in danger of falling towards the street.

6. Define the following terms referred to in the Model Building Bye-laws:—Base of Wall, Topmost Story, Party Wall, External Wall, Public Building, Building of the Warehouse class, Domestic Building, Dwelling House.

7. What are the requirements of the Model By-Laws with respect to the sufficiency of space about

buildings, to secure a free circulation of air, and with respect to the ventilation of buildings?

8. Draw a Sketch Plan and Section of a Temporary Small-pox Hospital, with its accessories, for six patients, constructed in either Wood and Corrugated Iron or Wood and Willesden Paper; figure thereon floor area and cubical space; describe the preparation of the site, and specify shortly for the respective materials used in its construction and internal finish.

8. What regulations would you propose for the arrangement, construction, and structural working of a New Theatre on the safest lines, selecting your own site and dealing with the subject under the following heads:—1st. The means of egress. 2nd. The prevention and isolation of fire. 3rd. The lighting arrangements.

Sanitary Science.

1. State, in general terms, the chemical condition of the atmosphere in an overcrowded and ill-ventilated room. In what manner does it act on the physical system?

2. How many cubic feet of air-space should be allowed, per head, in a bedroom?

3. In what manner may drinking-water become contaminated in a dwelling-house? What constructive arrangements are necessary to prevent such contamination?

4. What are the requirements of the Model By-Laws with regard to house-drainage? Give a sectional diagram of a three-story house in illustration, shewing the drainage thereof connected with a street sewer.

5. What tests would you apply to house-drains to discover any escape of sewer-gas?

6. What are the leading principles in the design of a system of town drainage, of say 50,000 population, having a free river outfall: I. In a flat district? II. In a hilly district?

7. What principles govern the ventilation of sewers, and what relation thereto has temperature, gradient, capacity, and volume of flow?

8. Enumerate the best-known processes of sewage treatment at the Outfall, and describe some one in detail, stating, in technical terms, the mechanical and chemical method of procedure and results.

9. State under what respective circumstances a Tank Process, Irrigation, Land Filtration, or a combination of either, may be most desirable.

10. Describe the difference, in principle and action, between Irrigation and Filtration.

Public Health Acts and Rivers Pollution Acts.

1. The Public Health Act is divided into several parts. State how many, and give the names of Six Divisions.

2. Give the Titles of the several Acts of Parliament incorporated with the Public Health Act.

3. A Local Authority having undertaken to remove refuse, &c., (*a*) State the provision of the Act dealing with their neglect of this duty, (*b*) The number of days specified in the Act as involving a penalty, (*c*) The penalty incurred.

4. State generally the process set forth in the Act for the Repairing of Private Streets, and under what Section Private Streets may be declared "to be repairable by the inhabitants at large."

5. Give the definition in Act as to "What is to be deemed a New Building?"

6. State the Surveyor's legal duties and position with respect to ruinous or dangerous buildings, and the title of the incorporated Act under which proceedings are taken.

7. State the proceedings to be taken by a Local Authority in dealing with a nuisance *outside* the district.

8. State shortly the "General Provision" of the Act with reference to contracts.

The results of the Examination are not yet announced.

THE *QUARTERLY REVIEW* ON TECHNICAL EDUCATION.

UNDER the heading "Technical Education and Foreign Competition," the *Quarterly Review* publishes in its current number an interesting article, apparently written with practical experience of the workshop, the main bent of which is to urge that the present bias towards technical education in a scholastic form is a mistake; that technical education in the sense understood by its advocates will not in itself effect the end of enabling English manufacturers to compete on better terms with those of the Continent; that the best form of technical education is apprenticeship and actual work in the shops. The writer may be one-sided, but he puts his side of the question with considerable force, and it is worth while to give further currency to his argument by reprinting some portion of it in these columns:—

"In July, 1887, the 'National Association for the Promotion of Technical Education' was formed, its purpose being the encouragement of educational reform by legislation, or otherwise. The prospectus of the intended work of the Association is too lengthy for quotation, but it embraces the promotion of technical training by the teaching of the elements of science, of drawing, the use of tools, and the reform of our system of primary instruction, in order to adapt it to the industrial work of the nation. The Association has organised meetings and lectures, and circulated a large number of tracts and leaflets in furtherance of this object. We have, we think, perused the whole of these, and find the burden of their utterances to be that English trade is going to the dogs for want of technical instruction. We meet with the same well-worn vague generalities; we are told of the marvels which technical instruction will accomplish on our behalf; but for argument, proof, and practical schemes, we search in vain.

We may say, then, speaking broadly, that the efforts of our educational reformers are now being made in two directions: the one, to impart technical and technological education in the elementary schools, both in day and evening classes; the other, to introduce training more practical than that afforded by South Kensington and the City Guilds into the secondary and higher-class schools. The first is in the supposed interests of the artisan; the second in that of the manager, employer, and commercial representative.

Expressed in general terms, the reasons assigned for the need of technical education are—that through its neglect we are being beaten in the markets of the world; that the apprenticeship system has broken down, and is practically a thing of the past; that technical schools alone can take its place; and that the condition of the workman himself will be improved in every way by such training. These are, concisely, the arguments, put in various forms, which we meet with in studying the literature of this subject.

We cannot, in the limits of this article, discuss every aspect of the question, nor answer every objection, but we shall deal rather with the broad features, the general aspects of the arguments in favour of technical education. We feel compelled, however, to make special reference to the article of Professor Huxley in the *Nineteenth Century* for February last:—

'We must,' he says, 'be a nation of shopkeepers under penalty of starvation; and as our customers will naturally seek to get the most and the best they can in exchange for their food-products, our struggle for existence is found in the necessity to make the goods we have to offer better than those offered by our competitors. . . . . The old apprenticeship system has broken down. Inventions are constantly changing the face of our industries. The instruction given by the master must therefore be more than replaced by the systematic teaching of the technical school."

We are as deeply impressed as Professor Huxley with the character of a struggle, in which death is the penalty of defeat. But we are also convinced that the bitterness of this internecine war cannot be mitigated by school and college training. Much of our argument will, we think, afford a complete refutation of the Professor's statement; but two plain facts may be just now adduced, by way of showing how fallacious is the idea that in the great bulk, at least, of *artisan's* work, education can exercise any appreciably beneficial influence. We adduce these facts now, because they are of the nature of independent testimony, and they afford a direct reply, as far as they extend, to the empirical remedies proposed for battling with the operation of a cruel law. We admit the struggle, but we deem the remedy altogether inadequate.

Our facts have reference first, to the great superiority of training which is gathered practically in the shops over that gained in technical schools; and, secondly, to the fierceness of the competition arising from the pressure of population on the means of subsistence.

Referring to the Commissioners' Report, they say, speaking of alkali works, 'in no country does any real amount of scientific education reach the ordinary workman in alkali works, who are rather labourers than artisans' . . . . hence 'the foreigner has no advantage over us, nor have we any over the foreigner' (vol. i. p. 229). While admitting that managers of Continental alkali works are trained in science better than English managers, they say distinctly that the foreigner is not a 'better alkali maker than the Englishman' (p. 230), and they point out that all important improvement in this branch of industry has originated in England. Yet this is a trade which is wholly based on chemical knowledge.

Again, in connexion with some machine and tool works near Zurich, it was represented to the Commissioners that a 'boy coming to the shop at fourteen becomes, as a rule, a more skilled and valuable artisan than the highly-educated youth coming at twenty' (p. 283). And, 'There are many workmen and foremen possessing practical skill and high scientific knowledge who have not attended a Polytechnic School, and there are some who have enjoyed the fullest advantages of the Polytechnic School who are not only much inferior in practice, but are very deficient in scientific knowledge also' (p. 284). Further: 'Employers in Switzerland stated that it was only by the greatest economy, and an attention to detail which English manufacturers would not trouble themselves with, that Switzerland could face the competition of England and other foreign countries' (p. 293).

Speaking of German cotton-spinning, the proprietor of a cotton factory in one of the Rhine Provinces admitted that he could buy English yarns cheaper than any spun in Germany. Yet his men worked seventy-two hours per week, and received lower wages than Lancashire operatives, while to the cost of the English yarns would be added that of carriage, packing, and import duty (p. 295).

Testimonials similar to these could be multiplied both from the Commissioners' Reports and from the weekly technical journals; and they more than outweigh a far larger number of vague generalities, too often repeated at second hand. But these will suffice just now to show that it is not yet proven that technical training, in the sense in which its advocates understand it, will aid us in a struggle where labour is so divided and machinery so universal, that the artizan's duties are nearly as automatic as the operations of the mechanism that he superintends.

A fact, the full force of which Professor Huxley as a biologist will admit, is the multiplication of individuals beyond the means of subsistence. The influence on work and wages of this too rapid increase, coupled with pauper immigration, is fully apparent in Mr. Burnett's 'Report to the Board of Trade on the Sweating System at the East-end of London.' The whole Report reads to us like a bitter mockery of the panacea of Technical Education—a running commentary on the 'severity of a competition, in which *those who can subsist on least are sure to be victorious.*' Mr. Burnett avers that 'the supply of cheap labour has of late years been enormous, and when there was the slightest difficulty in obtaining it at the prices offered, there was no difficulty in obtaining more people from abroad.' The men and women in the sweaters' dens work from fourteen to sixteen hours a day. 'The tea half-hour is in many cases not allowed at all. If a female worker were to insist upon a regular half-hour for tea, she would be sent about her business.'

It will enable us to obtain a clearer idea of the scope of this question if we endeavour, from a matter-of-fact point of view, to ascertain the true conditions of *paying* work. For this is really what the whole question resolves itself into—even according to the showing of the advocates of technical education—it is simply one of successful competition, that is, of paying trade, which of course puts on one side all considerations of a purely intellectual character, the higher training of the mind, and so forth. It is *technical*, not general, education which is in question—that training by virtue of which a man shall be qualified to do his work in the *best* manner, in the *shortest* possible space of time. Keeping this essential fact clearly in view, the matter is very much simplified.

Now, it will be admitted that the education which is adapted for one craftsman is not suitable for another. An engineering draughtsman's training, for example, involves the study of the principles of mechanics, of mathematics, geometry, and the actual work of drawing. A knowledge of these things is absolutely necessary before a man can earn his living at all as a mechanical draughtsman, and he, by the special study of these subjects, qualifies himself for the special business of his life. The necessity becomes thus the incentive to the acquisition of the knowledge. Or, taking an engine-fitter:—his special training lies in this, that he must understand the drawings from which he has to work, that he shall be able to execute any piece of work submitted to him in a proper manner, and effect such a union of parts, according to the design and the materials provided, that a perfect machine is the result. Unless he can do these things, read a drawing, handle the chisel, file, scrape, screw taps, &c., with celerity and accuracy, he cannot earn his living in that sphere; and here, again, necessity

becomes the incentive to the development of aptitude. The founder has to understand the nature of his moulding-sands, and the different qualities of metal, the venting of moulds, the conditions of pressure, pouring, and so forth. The pattern-maker, again, has to master the drawings, the manipulation of wood-working tools, and the principles of moulding. The metal-turner or the machine-hand must learn the best angles of his cutting-tools, and their adaptation to the different metals which he has to shape. The boiler-maker or smith must know the nature and mode of treatment of the different qualities of iron and steel which have to be welded, rolled, punched, or riveted. In each of these departments, therefore, the education required is different from that in any other department. Though each of these is comprised under the generic head of 'engineering,' each nevertheless demands knowledge of so very distinct and special a character that the workmen are isolated from each other; they have to spend several years in acquiring the knowledge necessary to the exercise of their craft, and they never work in any department save their own; and without that special knowledge they cannot earn their living as workmen. Hence we conclude that the only technical education which is of any value is that which is acquired *in the shops*. But then this is synonymous with the learning of the trade, or with *apprenticeship*. And therefore we hold that no amount of theoretical education can compensate in the least degree for the lack of that special skill which can be acquired by apprenticeship alone. Euclid will not enable a man to file a surface more true or in less time than another who has not studied Euclid. Algebra will not aid a founder to prepare and pour his mould more efficiently than a fellow-workman alongside who has not mastered the mysterious symbols. And that which does not aid, often tends to hinder, by introducing a distraction of mind, leading the thoughts away to subjects lying outside the range of daily toil. Not that we consider some intellectual distraction amidst the eternal dulness of the workshop an evil; but we are following strictly the lines of our argument, that intellectual knowledge, mental equipment, will in no case take the place of practical skill, nor aid a man to do his work *cheaper* or *better*. And this skill, we maintain, is to be gathered in the shops, and, if not acquired there, it can be obtained in no other way.

That man, then, is technically trained who has learned his trade thoroughly, even though he might be unable to obtain a certificate of merit in any scholastic or scientific examination. And if the practice of the complex branches of engineer's work can be better acquired in a workshop than in a technical school, certainly then the training of the latter will be of even less value in those numerous occupations in which little skill is wanted.

It may be objected that we have omitted all mention of certain subjects, some knowledge of which must inevitably be required in workshops, such as the principles of mechanics, geometry, chemistry, hydrostatics, strength of materials, and others kindred thereto. But people who insist on this show considerable ignorance of the conditions under which workshop practice is carried out at the present time. Men are 'hands,'—skilled hands, if you like, but nothing more; and, being such, these subjects would, if acquired, be forgotten for want of use. One may be a good workman, and work during many years in a good shop, and not once during many years may he have occasion to put to practical use any single important fact in either of these branches of science other than that which has come to him in a matter-of-fact way during the acquisition of his trade. A founder instinctively knows how to load his flasks without going into estimates of liquid pressure. An erector knows what load a chain of a certain size should carry safely without calculation. A smith learns the qualities of his iron and steel, as affecting questions of suitable heat for forging and welding, without making analysis of its chemical composition. As much knowledge of these and kindred subjects as is necessary to the proper accomplishment of good work comes naturally in the course of practical training. A man of ordinary ability cannot spend several years in a shop in the earnest practice of one section of handicraft without acquiring, in a very matter-of-fact sort of way, a knowledge of as much scientific truth as is requisite for that practice, the penalty for not knowing being mistakes and disgrace. Moreover, a technically-educated man, meaning by that, one who has mastered the text-books only, would be immensely more at fault than an uncultured but practical and observant workman, because, although the first might reason and calculate with strict precision as taught by text-books, he would in nine times out of ten, perhaps, fail to take account of those modifying practical conditions which would invalidate all his calculations. Without the least hesitation, let us say that we would far rather entrust the execution of a difficult piece of work to a man who scarcely ever opened a book, than to one who, though highly trained in theory, had not worked during many years in the shops. It is the latter man who would blunder.

But it is said that the establishment of workshops in conjunction with collegiate institutions will furnish the higher kind of technical training that is desirable. Assuming, for the sake of argument, that such training is desirable, how can more specialised knowledge be gathered in these than in the regular shops? There is about as much similarity between the workshops attached to these colleges, where pupils play at engineering, and the actual shops where the work of the world is done, as there is between an amateur mechanic's room and a factory. In the college workshop, time counts for nothing; in the factory, it is of the first importance. In the one, the work is of a uniform, straightforward, experimental, and *dilettante* character; in the other it is done under circumstances of haste and difficulty, frequently without precedent — under ever-varying conditions, and competition—the prime purpose being the making of a substantial profit. In the college, tasks of the most varied character are performed under the guidance of a single teacher or demonstrator, while in the factory each leader is a man who is skilled in one department only. Therefore the collegiate establishments do not conform to the conditions of actual work; and, such being the case, have so limited a value that they can never have any influence in turning back the tide of foreign competition.

In the training of engineers' articled pupils in the factory, the conditions necessary for the acquisition of practical skill are much more favourable than in the technological school. These pupils spend six months, twelve months, two years continuously in a single department or workshop, the whole of each day being devoted entirely to the acquisition of that one branch. Moreover, the pupils are always youths who have had a good grounding in elementary and secondary schools, often also in collegiate institutions, almost invariably possessing such knowledge of classical and modern languages, mathematics, and the leading principles of science, as youths are able to master before the ages of sixteen or seventeen. They are invariably, too, lads whose physical development is good; so that, with a sound mind in a sound body, they are able to assimilate knowledge under more advantageous conditions than the children of the artisan classes. Now, the most which can be said of the pupils who receive instruction under such favourable circumstances is that, with a very few bright exceptions, they would be quite unable to earn their living afterwards as second-rate craftsmen. Of course it must be understood that they do not come into the shops expecting or intending ever to live by manual labour, they want to gather a general knowledge only of the business throughout. But the fact remains, and this applies with equal or greater force to evening artisan classes, that it is impossible for anyone of average ability to master the mysteries of an intricate craft in the course of two or three sessions, even under practical teachers fully qualified for their work. If pupils, who have enjoyed the best advantages of elementary and secondary education, who work in shops surrounded by skilled workmen, 'where iron sharpeneth iron,' and amidst machines and operations of the most multifarious character, cannot acquire a trade in less than four or five years, how can youths, who employ only two or three sessions in technical schools, hope to become more skilful than the men who, without preliminary training, have stuck doggedly to the bench, the forge, the vice, throughout the regulation term of apprenticeship? There is no royal road to the learning of handicraft. . . . .

The point then at which we arrive is this, that the so-called technical education, by which it is proposed to supplement shop training, can never have any appreciable effect on British trade. The broad difference between this aspect of the question and the one which it is intended to combat, is that the first regards the *workshop* as the true training school, and the second proposes a training *outside* of the shops, on the basis of a more or less technological education.

In a matter of such moment as this, it is well to have very clear ideas of the point at issue. We will now, therefore, say definitely that we look to apprenticeship as furnishing the true training of a skilful craftsman for his life work. It seems like giving utterance to a truism to say this, yet the value of apprenticeship is in danger of being lost sight of. We are plainly told the system has broken down. We admit this is the case in many trades where, owing to the division of labour and the introduction of machinery, little or no training is required; but for the present we must be understood as speaking only of those occupations where the highest skill and most painstaking efforts are still essential. In these it is certain that no technical training of a pseudo-scholastic character can ever take the place of apprenticeship.

The system dates from the establishment of the craft guilds of the Middle Ages. No person was admitted a member of the guilds who had not served an apprenticeship, commonly lasting in England for seven years, but on the Continent for lesser periods. Ultimately the usage of centuries was codified by the Statute of Apprentices, 5 Elizabeth, c. 4. With the growth of the factory system, during the latter portion of the eighteenth and the commencement of the nineteenth centuries, the masters made strenuous efforts, first to evade the provisions of the Statute, and then to get it repealed. In 1814 they succeeded, by 54 George III., c. 96, in obtaining its abrogation for all trades, save those in London; and since that time, though the practice has been retained in many of the trades where high skill is essential, it is not compulsory, and the arrangement often takes the form of a verbal agreement only.

In a large number of shops, therefore, probably in the majority, no apprentices are now taken; for two reasons, one being that more boys can be passed through the shops in a given time, the term of non-indentured service being often less than the old-fashioned seven years, the other being that lads who are not indentured give less trouble to the employers than those who are regularly bound, because the first can be discharged for misbehaviour. There is, in consequence, a loosening of the bond which formerly subsisted between the employer and those who come to his shops to learn their trade. And whereas in years past, under the old indenture system, the apprentices were taught directly by their 'master'—in every case a true craftsman, who had also gone through his period of apprenticeship—they are now placed under the charge of a foreman or of a leading hand, who has no personal interest or pride in their advancement, but whose interest is very often really identically with practice which becomes a deterrent to the lad's advancement; in other words, it often *pays* best to keep a youth at a certain *section* of work at which he has become proficient, rather than pass him on to learn another section in the same department. And, as a matter of fact, the employer in one of our modern mammoth establishments barely knows his lads by sight, probably never speaks to one of them, except, perhaps, to send him to fetch the foreman or manager. This lamentable estrangement, which prevails in our big establishments, is a great evil, and is one cause of the lack of skill which we deplore in a section of our workmen. As lads they have never been trained, because it has been nobody's business to teach them, while in some cases the very narrowness of their occupation has been their master's gain. In a more thorough conscientious training of lads during the years of their apprentcieship, lies, as far as the higher crafts are concerned, the remedy for the foreign competition so much dreaded."

The Drying-up of the Zuider Zee.—A Rotterdam correspondent states that the project of drying-up the Zuider Zee, of which so much was heard a little while ago, has apparently stranded, the *entrepreneurs* being unable to raise the capital required. However, the task of ascertaining the nature of the soil at the bottom is being proceeded with.

A Lady Architect.—A Finnish lady has obtained the sanction of the Senate of Finland to enter the School of Architectural Teaching at Tammerfors, for the purpose of studying architecture.

ARCHITECTURAL ALTERATIONS AND ADDITIONS IN OXFORD.

CONSIDERABLE architectural additions have been made in Oxford during the past year, the most important of which are thus described by the *Oxford University Herald*:—

"The chief building being erected, of course, is that of Mansfield College, which is likely to be ready for occupation early in next year. The buildings are grouped, forming three sides of a quadrangle. The President's house and library block, which are connected by an octagonal staircase turret, form the west wing; the lecture-room block, tower, and dining-hall block form the south side, having a frontage of about 180 ft., the tower being nearly central; the chapel forms the east side of the quadrangle. The whole of the stone for the exterior elevations is Taynton, from quarries at Milton; for inside dressings Corsham Down has been used. The slating is by the Naunton slates, which harmonises well with the stonework. The architect is Mr. Basil Champneys, B.A., of Buckingham-street, Strand; the general contractors, Messrs. Parnell & Sons, of Rugby.—At Trinity College, the new President's house has been completed, the principal doorway of which is in the centre of the south front. The architect is Mr. Jackson, and the gables are varied with the scalloped ornaments conspicuous in several of this architect's recent works in the city.—At Magdalen College, the residence of the Principal has been finished, the south front of which is most effective.—The new tutors' residence in connexion with University College has lately been completed. The house is built on the site of the old *Herald* printing-offices, and adjoins the College Library. Mr. Moore is the architect, and the work has been well carried out.—Considerable progress has been made with the new block of Brasenose College facing High-street, between Radcliffe-lane and Amsterdam-court, and when finished it will be a striking addition to the architectural features of High-street. The present structure consists of a new house for the Principal and five sets for undergraduates, an imposing tower being placed at the west-end, beyond which there will eventually be an extension. The front elevation may be described as fifteenth-century Perpendicular, and will be 42 ft. in height from the ground-line to the roof-ridge. The tower will be 62 ft. in height, and under it is the main entrance, formed with a fine Tudor archway, with a groined roof, leading into Amsterdam quad. The cost is estimated at about 12,000*l*. Mr. T. G. Jackson, of London, is the architect.—A massive block of building has been added to Hertford College. It is of Classic architecture, corresponding with the old wings on either side; it is, however, more elaborate in design. The new block comprises a kitchen and office in the basement; a porter's lodge, a set of undergraduates' rooms, a bursary, and a buttery on the ground floor; and on the first floor there is a dining-hall and a serving-room, these being approached by a broad flight of moulded Portland steps. The front entrance gateway is well designed. There are fluted columns with carved capitals on each side, and the ornamentations are worthy of inspection. Upon entering the archway into the quadrangle and turning to the left is found a beautifully-designed staircase, which is very unique, and octagonal in shape; while on the right and left of the entrance archway, leading from the quadrangle into Catherine-street, is a column with moulded bases, and capitals with pedimented head. Clipsham and Doulton stone have been used for the exterior of the building. The architect is Mr. T. G. Jackson. It is anticipated that the work will be completed about Christmas.—There has been a very extensive restoration to the stonework on the north and south side of Merton College Chapel. The tracery panels in the buttress have been carefully reinstated.—The building for the Delegacy of Unattached Students has been completed, but we have recently given some account of this addition to the High.

Amongst the more important miscellaneous work may be mentioned a new lodge at the north end of the University Museum grounds. It is built of stone, and is a very picturesque little building. Mr. Moore is the architect.—A new wing is being built at the Hospital for Incurables, which is to contain patients' rooms and a temporary chapel. Mr. Parsons, of London, is the architect.—A new mission chapel is to be erected on the north corner of Charles-street, Cowley St. John, and excavations have already been commenced. The plans were prepared by Mr. Mardon Mowbray.—At Osney Bridge, the work, which has been much hindered by difficulties with the foundation, is now approaching completion.—Considerable alteration and improvements have been made by the Local Board in the matter of widening and laying out new streets, and many business houses have undergone alterations."

CASE UNDER THE METROPOLITAN BUILDING ACT.

AT the Westminster Police Court, the Royal Aquarium and Winter Garden Society (Limited) were summoned before Mr. Partridge, by Mr. E. D. Drury, District Surveyor, for an alleged infringement of the Metropolitan Building Act, 1855, by re-covering a portion of the roof of the Aquarium, situate in Westminster (formerly consisting of glass), with a combustible material. Mr. W. Doveton-Smyth appeared, on behalf of the Company, for the defence.

Mr. Drury, in opening the case, gave evidence that he discovered, on the 18th of June last, that the roof of the Aquarium was being covered in place of the glass with a material known as "Patent Wire Wove Roofing." This consisted of a close wire mesh, the interstices being filled with a gelatinous, semi-transparent, oily substance, in the opinion of witness highly inflammable. He gave notice for the work to be discontinued, but it was proceeded with and finished. An appeal was made to the Metropolitan Board of Works, and they decided, after hearing both sides, in favour of the contention of the District Surveyor. The new material might have some advantage over glass, but the heat which would break glass would probably burn the new material. (Mr. Smyth disputed this, and to test the matter a piece of the stuff was ignited. It burnt slowly at the sides, but not in the middle.)

In answer to Mr. Smyth, Mr. Drury said he was not aware that Colonel Majendie, the Government Inspector, approved the material, or that it was used over powder magazines and at all the recent Exhibitions.

Mr. Smyth said it would cost the Company over 2,000*l*. to make any alteration now. Their defence was consent and acquiescence on the part of the District Surveyor's representative to use the material, and that the same was in every respect safer than glass.

Evidence was given in support. The scientific witnesses stated that there was no possibility of the Aquarium roof taking fire, and that the fire risk had been much lessened since the employment of the patent material, and that the same was used at the Colonial, American, and Irish Exhibitions.

Mr. Partridge said it was proved the company had availed themselves of a most valuable and useful invention. Mr. Drury, no doubt, took up the case in the interests of the public, but the summons might safely be withdrawn.

Mr. Drury refused to do this, and the matter was adjourned until the 30th ult.

Upon the adjourned hearing, Mr. Smyth called Mr. Walter Emden, architect, Mr. G. Harkfoot, railway surveyor, Mr. G. H. Harrison, civil engineer, and other witnesses, whose evidence went to show that the material was practically fireproof; and, after hearing these witnesses, Mr. Partridge dismissed the summons.

Notice of appeal has been lodged.

PAVING APPORTIONMENTS.

AT the Dalston Police Court on Tuesday, Messrs. T. J. Marshall & Co., of Campbell Works, Stoke Newington, were summoned by the Hackney Board of Works for 54*l*. 2s. 1d. ordered to be paid by them by an order of apportionment made by the Board in respect of the cost of paving a road known as Chapel-road, Stamford Hill, and which the Board alleged was a "new street" within the meaning of the Metropolis Management Amendment Act, 1862, Section 112.

Mr. C. E. Jackson, solicitor, defended.

The defence was that Chapel-road, formerly known as Birdcage-walk, had, previously to the passing of the said Act, been taken into charge by the authorities having control of the pavements or highways in the parish of Hackney; and that, therefore, the Act did not apply to this case.

Mr. William Lewis, an old inhabitant of the neighbourhood, proved that he remembered Chapel-road being maintained by the parish for the last thirty years, and that there had been houses during that period along the greater part of one side of the road.

Mr. James Lovegrove, C.E., the Surveyor to the Board, corroborated this, stating that the Board had repaired the road ever since he was appointed in 1856, and that the defendant's property upon which the paving claim was being made was then old property.

Mr. John Hamilton, surveyor to the defendants, proved by the production of Ordnance maps that the property in respect of which the claim was made was in existence before the passing of the Act, and in the same state as it is at present.

The Magistrate said that, considering the evidence before him, he should decide that Chapel-road was not a "new street" within the meaning of the Act.

The summons was therefore dismissed.

THE EPIDEMIC OF DIPHTHERIA AT MIDSOMER NORTON.

SIR,—Whatever may be the cause of the outbreak of diphtheria at this place, I beg to be allowed to state that I do not agree with what Mr. Reeves says on p. 308 about the ventilation of sewers, and about "excessive friction" causing traps to be syphoned, "and sewer-gas of the worst kind forced into dwellings." Now, what traps does he mean that are syphoned? There ought to be a disconnecting ventilating trap nowadays between every house and the sewer, which trap ought to protect both the house and its drains and pipes from the sewer air or gases, &c. Further, even supposing that some of these disconnecting traps were occasionally unsealed, if the drains were right the sewer air should not get into the house, but get exit outside of it. Before we can blame the sewers we would require to know exactly the style in which the drains are connected to them, and the way in which the high-level blow-off pipes are connected, and also their number, size, and distance apart. There is a right and a wrong way of doing everything, while a good plan will often be spoiled by bad workmanship or scamping. It is astonishing the ignorance that still exists amongst many tradesmen regarding drainage work, while, if it is an estimate job, others will scamp it in every way they can. The letter of Mr. Reeves on p. 308 does not seem to me to exhibit much knowledge of the subject, either theoretically or practically.

W. P. BUCHAN.

Glasgow, Oct. 29, 1888.

The Student's Column.

ARTIFICIAL STONES.—XVIII.

Stones made with the Assistance of Alkaline Silicates (continued).

ELLIS'S artificial stone, patented in 1857, was composed of powdered marble, shells, porphyry, granite, calcined bones, malachite, freestone, or other natural aud suitable substances, mixed with lime and a solution of soluble glass, so as to form a plastic compound, which is then moulded with or without pressure, according to the purpose for which it is required.

Ott's stone, said to resemble the best quality of Portland stone, is an American production, and is formed of a mixture of hydraulic cement, lime, and soluble silicious earth, or water-glass, to which is added powdered dolomite which has been heated up to 50° Fahr.; the mass having been well kneaded, is pressed into moulds and dried.

Barff prepared artificial stone in 1861 from a mixture of silicate of soda, powdered pumice, and dry white-lead. The compound pressed into moulds becomes very hard and insoluble. Coombe and Wright, about the same time, proposed to utilise the freshly-precipitated silica, obtained in the production of the hydrofluosilicic acid employed in their patent process for preserving stone,* and the same patentees also proposed to use the acid itself for forming stone by admixture with lime, chalk, or other suitable material.

J. P. Weimar patented in 1862 an artificial marble composed of flint, granite, fire-clay, chalk, quartz, and other material, mixed with soluble glass in various proportions, stirred to pulp, and poured into moulds of plaster of Paris. H. Ellis suggested the addition of newly-precipitated silica, or compounds obtained by the addition of borax, phosphate of soda, chromate of potash, &c., to the ordinary soluble silicate solution; this mixture was to be employed in the manufacture of stones by adding it to any suitable earthy or stony matters, and burning the shaped articles. Thomas's patent, of 1862, might also be included in the section in which the utilisation of residuals and by-products is discussed. According to this process, artificial stone is to be made from the vat waste of the alkali maker, and the oxide of iron from burnt pyrites, mixed with soluble silicate. Shellinger's pavement flags, which have been used with some success in New York, are composed of a mixture of 10 parts of coarse sand, and 1 of cement with gravel, pebbles, &c., as required; this basis is pressed into moulds, and covered with a fine composi-

* See *Builder*, June 18, 1887, article "Preservation of Stone."

tion, made up of 2 parts of pure sand, 1 of cement, and 1 of any metallic oxide or colouring matter; when nearly dry the stone is coated with soluble glass.

In 1863 a patent was obtained by F. de Wylde, for making artificial stone from the usual ingredients mixed with silicate of soda, and then with solution of an aluminium compound.

A New York patentee, in 1866, utilised the solvent property of sugar to obtain a lime-containing solution, to which was to be added silicate of soda, so that a copious precipitate of silicate of lime was thrown down, which might be used alone or in combination with gypsum, chalk, sand, cement, &c., in the manufacture of artificial stone.

In 1868 and 1869, the Rev. H. Highton, M.A., obtained his two patents which led up to the successful manufacture of the largely employed "Victoria Stone or Silicated Concrete." They may be thus briefly summarised:—No. 2,048 had for its object the production of slabs or blocks from good hydraulic cement, which were then to be soaked in a solution of soluble glass containing freshly-precipitated or other soluble silica in solution; the 1869 patent (No. 1,384) involved the use of sand, gravel, or other hard stone, which were to be added to the ingredients mentioned in the preceding patent, and the dried stone might also, in order to preserve it, be brushed over with paraffin or solution of gum copal. The really essential point about Highton's process is the use of a bath of alkaline silicate, in which is placed free silica, so that as lime extracts silica to form the desired silicate, the caustic alkali set free immediately dissolves some of the added silica to re-form silicate, which in its turn is decomposed by a fresh quantity of lime; so that theoretically a small portion of caustic alkali should serve to convey an indefinite amount of silica to the lime, but, of course, in practical work there must be gradual loss and absorption of alkali.

The patent Victoria stone, which has been used for years past, is produced chiefly from the *débris* of the Groby granite quarries, which is carefully crushed, mixed with tested and selected Portland cement, soaked in the silicate solution already referred to, dried, and washed. The stone formed is of good colour, and hard and tough. The granite of the quarries mentioned produces better results than most other varieties, a result attributed to the fact that it crushes in a more granular or angular manner, so that the particles bind better with the cement than do the majority of granites and other hard stones, which have a tendency to form flaky particles on being broken up.

Emmens, in 1871, proposed the utilisation of granite waste, by combining it with a cement of silicates or other salts and lime, or with a bituminous mixture.

In 1884 Thompson & Bryant patented a stone which was formed of crushed granite chippings, 15 per cent.; Portland cement, 15 per cent.; crushed iron slag, 40 per cent.; silicate of soda, 10 per cent.; and water, 20 per cent.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

15,114, Pile-drivers. G. Sonnenthal.

The main feature of the improvement which is the subject of this invention consists in constructing the frame or tripod of the apparatus of wrought-iron or steel tubes, in such manner that it can be easily erected and lowered, and readily taken to pieces. Many parts are also altered in form with the view of ensuring greater portability. The legs, which are doubled in form, are fixed by extending the parts, and fitting a clamp or ring over the lap joint, making all secure.

15,509, Warming and Ventilating. R. Oakley.

Provides for heating incoming air for ventilating purposes in winter time by means of gas, and for carrying off the products of combustion safely and effectively. The air is admitted from the outside, along a channel which is heated by gas-jets. The apparatus is fixed outside the building, and is portable, so that it can be removed in the summer time.

3,708, Fireproof Curtains, Panelling, Slabs, &c. T. B. Lee.

Asbestos fibre is mixed with concrete or cement, or with finely-broken slag or broken fire-brick. It is put in while the mixtures are in a semi-liquid state, and helps to bind the mass together. When cast into blocks, it is used as a fireproof theatre curtain.

6,135, Ladders, Fire-Escapes, or Steps. W. Mitchell.

These ladders are constructed in two or more sections, and pivoted or hinged together at each jointure by bolts in the top sides of the lowest section, and in the bottom side of the second and subsequent sections. Safety-pins are also attached for greater security.

10,770, Improved Door-Fastener. H. L. Hind.

An iron hasp is made with two projections at one end and an oblong slot at the other, through which an iron wedge is made to fit, the same being attached to the hasp by a small piece of chain. The hasp is placed on the door-jamb, and the door forced to. This drives the spikes into the cill or door-frame. The iron wedge is then pushed into the slot, and no one can open the door without great violence.

10,955, Door Stops and Closers. H. H. Schou.

This is a device to prevent the slamming of doors, which will also act as a buffer-stop to arrest the movement of the door and allow the same to close quietly. It is actuated by springs, and forms in one device a door-closer and stop.

12,107, Door Closer, &c. J. H. Bean, and W. Gaines.

This closer operates by means of atmospheric pressure and compression. Hinged horns are fixed on each side of the piston-rod and casing, and the door is carried in a shoe, the apparatus being fixed in the floor. By special mechanism the door is held steady in a closed position, and not blown open by draughts, &c.

NEW APPLICATIONS FOR PATENTS.

Oct. 19.—15,022, R. White and P. Ayton, Door Furniture.—15,061, G. Kenrick, Hinge.

Oct. 20.—15,123, L. Müller, Door-plates, &c.

Oct. 22.—15,136, E. Cain, Weather Strips for Doors.—15,152, J. Denham, Brick-machines.—15,168, A. Bradley, Fret-saws.—15,176, L. Teale, Fireplaces.—15,178, A. Robinson, Apparatus in Combination with Water-waste Preventors.

Oct. 23.—15,202, I. Shone, Sewer or Drain Flushing Tanks.—15,203, I. Shone, Ventilation of Drains and Sewers.—15,223, S. Russell, Window-fastening.—15,235, G. Hayes, Sheet Metal Lathing.—15,236, J. Dewrance and B. Church, Cementing Asbestos.—15,243, J. and W. Witte, Door Springs.—15,246, W. Thompson, Ventilators.—15,251, S. Grossmith, Automatic Flushing Cisterns.—15,267, H. Budge and F. Jackson, Device for Preventing the Opening of Doors.

Oct. 24.—15,272, F. Bantin and C. Nolte, Overmantels.—15,277, J. Millar, Discharge and Overflow for Baths, Lavatories, &c.

Oct. 25.—15 355, D. Richmond, Drain-traps.—15,379, J. Hargreaves and A. Armitage, Fire Grates.—15,389, A. Winrow, Pressing or Stamping Tiles or Bricks.

PROVISIONAL SPECIFICATIONS ACCEPTED.

11,392, W. Price and E. Webb, Gas-lighting, Warming, and Ventilating.—12,017 and 12,018, H. Ramsay, Composite Water-tight Pipe-joints.—12,174, C. Young, Lock, &c., with Bolts for Doors, &c.—12,470, G. Falconar, Framing Sash Windows, Doors, &c.—12,583, G. Bellingham, Alarm Fastenings for Doors and Windows.—12,660, T. Secker, Automatic Door-holder.—12,946, T. Line and J. Daveney, Wainscots and Linings for Walls, Ceilings, &c.—13,424, F. Baynes, Open Register Stoves, &c.—13,633, W. Charlesworth, Window-fastenings.—13,696, C. Scott, Brick-kilns Fired by Gas.—13,735, J. Archer, Roofing Material, &c.—13,809, J. Wilson and A. Richardson, Window-sashes.—13,977, A. Del Guerra, Opening and Closing Window-sashes.—14,175, L. Pichery, Stone-working, Slate, and Marble Tools, and Holders.—14,198, S. Smith, Combined Ventilator and Gas-Bracket for Walls.—14,338, W. Wilkie, Ventilators.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

16,061, R. Reeves, Construction and Ventilation of Soil-pipes, House-drains, &c.—16,697, J. Davies, Fastening Door or other Handles to Spindles.—17,588, H. Ball, Opening and Closing Fanlights, &c.—7,206, C. Straub, Wall-Covering Composition.—10,332, T. Crapper, Disconnecting Traps for Sanitary purposes.—12,460, T. De Cohu, Fastening Window-sashes.—13,478, J. Wilson and L. Constantine, Veneers.

RECENT SALES OF PROPERTY.

ESTATE EXCHANGE REPORT.

OCT. 22.

By A. CHANCELLOR.

Barnes—The freehold residence, "Milbourne House"	£1,420

By HARMAN BROS.

Highbury—52, Grosvenor-road, 61 years, ground-rent £8. 8s.	550

By C. C. TAYLOR & SON.

Mile-end—20 and 21, Beaumont-square, 40 years, ground-rent £9	515
14, 16, and 18, Woolsey-street, 12 years, ground-rent £6	200
13, Holford-street, 40 years, ground-rent £2. 15s.	290
26, Norfolk-street, 35 years, ground-rent £2. 12s. 6d.	255
1, Dudley-terrace, 79 years, ground-rent £4	240
Stepney-green—19, Copley-street, 54 years, ground-rent £8	250

OCT. 23.

By H. W. SAFFELL and ELWORTHY & SON.

Wisbech, near—The Hundreds Farm, containing 102a. 2r. 3p., freehold	1,800
Upwell, Norfolk—Freehold land, 14a. 2r. 34p.	370
Lower Corner Farm, 147a. 0r. 34p.	3,000

By DEBENHAM, TEWSON, & Co.

Marylebone—9 to 13, Hereford-street, 32 years, ground-rent £15	1,400
An improved ground-rent of £75, term 32 years	950
Islington—102 to 104, Upper-street, 25 years, ground-rent £65	2,750
227 to 230, Upper-street, copyhold	8,085
An improved rental of £102 a year, term 20 years	760
291, 293, and 295, New North-road, 20 years, ground-rent £15. 10s.	580
297, New North-road, 20 years, ground-rent 1d.	270
An improved rental of £50, term 20 years	510
Commercial-road East—No. 167, term 18 years, ground-rent £4. 16s.	270
City—215, Whitecross-street, freehold	1,010
Woodford, Church-end—Five copyhold cottages	1,250

OCT. 24.

By THURGOOD & MARTIN.

East Croydon—"Heath Lodge," and 47a. 3r. 15p., freehold	14,000
A freehold plot of land	600
An enclosure of land, 5a. 0r. 12p., freehold	350

By FRANK JOLLY & Co.

Lower Clapton—111, Rushmore-road, 88 years, ground-rent £5	185

By FURBER, PRICE, & FURBER.

Russell-square—30, Montague-place, and stabling, 12 years, ground-rent £31. 10s.	770
West India Dock-road—Business premises, with plant, &c., and goodwill	2,110
Poplar—The lease, goodwill, and plant, &c., carried on at 1 and 2, King-street	150
No. 55, West India Dock-road, part freehold and part copyhold	800

OCT. 25.

By BROWN, ROBERTS, RADMALL, & Co.

City—Moorgate-street-chambers, freehold, area 1,900 ft.	8,850
Borough—23 and 24, Essex-street, freehold	1,120

By H. STAINES.

Homerton—17, Ballance-road, 71 years, ground-rent £4	200
Bow—5, St. Stephen's-road, 65 years, ground-rent £4. 4s.	305

By E. STIMSON.

Peckham—34 and 36, Stanbury-road, 87 years, ground-rent £9	540
68, Lausanne-road, 80 years, ground-rent £5	250
Walworth-road—No. 260, term 60 years, ground-rent £14	1,430
6, South-street, 73 years, ground-rent £7	345
New Cross-road—The freehold residence, "Oak Hall House"	1,200
1, 3, and 5, Besson-street, 60 years, ground-rent £9	365
Clapham-road—22, Oval-road, 35 years, ground-rent £4. 15s.	250

By C. C. & T. MOORE.

Bow—67 and 69, Thomas-street, 88 years, ground-rent £8	400
Limehouse—40, Lockley-street, 71 years, ground-£3. 4s.	310
Plaistow—Freehold ground-rents of £43, reversion in 98 years	820

By GLASIER & SONS.

Strand—3, George-court, freehold	780

By F. J. BISLEY.

Rotherhithe—59, Albion-street, freehold	320
18 and 40, Clarence-street, freehold	350
9 and 10, Robinson-place, 29 years, ground-rent £2. 8s.	250
13 and 15, Forsyth-street, 73 years, ground-rent £4	250
29 to 35 odd, Verney-road, 89 years, ground-rent £20	600
40, Rotherhithe-street, freehold	265

By P. D. TUCKETT (at Romford-road).

Plashet Hall Estate—46 plots of freehold land	1,743

MEETINGS.

SATURDAY, NOVEMBER 3.

Association of Public Sanitary Inspectors.—Annual address by the Chairman (Mr. Hugh Alexander). 6 p.m.

MONDAY, NOVEMBER 5.

Royal Institute of British Architects.—The President (Mr. Alfred Waterhouse, R.A.) will deliver the opening address of the session. 8 p.m.

Society of Engineers.—Mr. H. Ross Hooper on "The Practice of Foundry Works." 7.30 p.m.

Clerks of Works' Association (Carpenters' Hall).—8 p.m.

TUESDAY, NOVEMBER 6.

Manchester Architectural Association.—Address by the President (Mr. A. H. Davies-Colley). 7.30 p.m.

Glasgow Architectural Association.—Mr. A. R. Scott, on "Perspective."

Society of Biblical Archæology.—Papers by the President (Mr. P. le Page Renouf), and Mr. E. A. Wallis Budge, M.A. 8 p.m.

WEDNESDAY, NOVEMBER 7.

Builders' Foremen and Clerks of Works' Institution.—8.30 p.m.

THURSDAY, NOVEMBER 8.

Arts and Crafts Exhibition Society.—Mr. George Simonds on "Modelling and Sculpture." 8.30 p.m.

Society of Telegraph-Engineers and Electricians.—Mr. W. Lant Carpenter, B.A., B.Sc., on "Ocean Temperatures in Relation to Submarine Cables." 8 p.m.

Import of Granite to St. Petersburg.—A large quantity of granite is now being imported into St. Petersburg for the work of paving the principal thoroughfares with this material, now carried on in the Russian capital. The stone comes chiefly from Finland and Scandinavia, but the quarry-owners in the latter countries have a difficulty in competing with the Finnish ones, as Finnish stone does not pay duty.

Miscellanea.

New Buildings for the Dairy Supply Company.—At the corner of Little Russell-street and Duke-street, Bloomsbury, an extensive block of new buildings is approaching completion for the Dairy Supply Company, on a site which has been leased from the Duke of Bedford, and which covers an area of about 4,000 ft. The buildings contain four main floors, with a fifth floor in the mansard roof. The two elevations are in stock brick, relieved with red bricks and Portland-stone dressings. The principal entrance is in Duke-street, the Little Russell-street frontage containing an archway leading into the interior of the building for the passage of carts and vans. In the basement and on the ground-floor there are large washhouses and dairies. Both these floors are lined throughout with glazed bricks, as well as the soffit of the flat fireproof ceiling. Above the first-floor windows is cut in stone the title of the company. In the upper floors of the building there are several suites of rooms for the employés of the company. The staircase is in Green Moor stone, and the walls and corridors have a coloured glazed brick dado. Each floor is provided with w.c.'s, coal-boxes, dust-shoots, and pantries. The corridors are all fire-proof, and finished with Messrs. Homan & Rodgers's metallic pavement. On the top-most floor there will be a laundry, furnished with coppers, washing-troughs, &c. The roof is also fire-proof, and above it an asphalted flat for the use of the inmates, protected by parapets and iron railings. The architect of the building is Mr. R. P. Whellock, of Finsbury-pavement, and the general contractors are Messrs. J. Allen & Sons, of Kilburn. Messrs. Doulton & Co., of Lambeth, will carry out the sanitary work. Messrs. Measures Bros. are supplying the iron-work. The estimated cost of the building, when finished, is 12,000*l.*

The Tallest Chimney in the World.—Referring to the paragraph, "A Tall Chimney," in the *Builder* of October 27, it appears that we were quite right in limiting the statement as to the chimney in question by saying that it was "described by American papers" as the tallest in the world; since it appears that although the chimney referred to, that of the Clark Thread Company, Newark, New Jersey, 335 ft. high, is the tallest chimney in the United States, it is exceeded by over 100 ft. in height by the Townsend Chimney, Port Dundas, Glasgow, which is 454 ft. high, and is thus the tallest chimney in existence. Two other high stacks are those of St. Rollox, Glasgow, 436 ft., and Dobson & Barlow's, Bolton, 367 ft. high. But these three chimneys were built for carrying off noxious fumes from chemical works, whereas the Clark chimney is built for the purpose of creating a draught for steam-boiler furnaces. It supplies draught for twenty-two boilers, having an aggregate capacity of 4,000 horse-power. While on this subject, it may be mentioned that another high chimney is being constructed at Freiberg, Saxony, intended to carry off blast-furnace gases at the Freiberger Muldenhütter. This chimney rises from a base 39 ft. 4 in. square, and will end at a height of 443 ft. in a circular section 10 ft. in diameter. The cost of the Freiberg chimney is 115,000 marks (5,750*l.*).

Barnard's Inn Hall.—Mr. Walter Crane informs us that the Art Worker's Guild have become the tenants of the ancient hall of Barnard's Inn, Holborn, with its court-room and offices, and that it will be available, on certain conditions, for the meetings of other societies, literary, artistic, antiquarian, or debating. The premises, we are informed, have been put in repair by the Art Workers' Guild, and can be inspected on application to the hon. secretary to the house committee, Mr. Reginald T. Blomfield, 39, Woburn-square, Bloomsbury, W.C.

The Sunday Society.—The Committee of the Sunday Society announce that the Arts and Crafts Exhibition Society have consented to the opening of their Exhibition on Sundays, November 4 and 18, between the hours of 3 p.m. and 9 p.m. The Exhibition will accordingly be opened on the Sundays named. The admission will be free by ticket, to be had of the honorary secretary of the Sunday Society.

The Sanitary Institute.—At a meeting of the Council of this Institute, held on the 25th ult., Sir Douglas Galton, K.C.B., F.R.S., in the chair, thirty-eight Members and Associates were enrolled.

Accident at Millbrook Church, Bedfordshire.—Monday's *Standard* contained the following paragraph:—"A curious scene was witnessed at the parish church of Millbrook, Bedfordshire, yesterday, when, in consequence of the body of the church being in a state of wreck, through a portion of the walls and roof having fallen a day or two previously, a number of people gathered together in the chancel, which remains intact, and partook of the Holy Communion. It was, however, found impossible to conduct the ordinary services there, and these were afterwards held in the parish room. A funeral took place on Saturday afternoon, and the coffin had to be deposited in the chancel while the Burial Service was being held. It appears that the rector, the Rev. F. L. Sharpin, had, along with the churchwardens, resolved to introduce a new heating apparatus into the building, and the workmen were engaged in making the necessary excavations in the nave, when one of the massive octagon-shaped pillars separating the nave from the aisles gave way at the foundation, which simply consisted of sand. Four men were in the pit, but they observed the stones begin to move, and made a rush for the door. They had, however, a very narrow escape, for they had only reached the porch when the pillar collapsed and fell into the hole where they had been working, bringing with it two of the arches and a large piece of the roof. A number of the old oaken pews were smashed, and the font, which was a very ancient relic, was broken into fragments; but three marble busts, standing on pedestals close by, being those of Lord and Lady Holland and Lady Ann Fox, who were formerly connected with the parish, were untouched. The church is a beautiful edifice in the Perpendicular style, and is one of the oldest in Bedfordshire."

The English Iron Trade.—There is comparatively little change in the English iron market, which remains steady on the whole, with a larger amount of business doing in manufactured iron and steel than in crude material. Pig-iron is not so strong in Cleveland and Scotland, but in Lancashire and Staffordshire, as well as in Wales, there is no giving way, owing to a strong demand, while the hematite iron trade in the north-west is fully and actively maintained. Scotch warrants have gone down in value during the week, and there has also been some trifling cutting-down in Scotch makers' quotations; Middlesbrough iron is also not quite so firm as it was; Bessemer iron, on the contrary, has gained 3d. per ton on the week. In Lancashire and Staffordshire sales are made at late firm rates. The demand for finished iron keeps up its standard of activity, and the trade is very healthy, with prices showing still an upward tendency. Notwithstanding the pressure applied by American buyers, tinplates keep very firm. The steel market is characterised by great briskness, and quotations for plates and angles are more stiffly held than ever, but there is a difficulty in getting better prices for other descriptions of steel. Shipbuilders continue as busy as ever, and there is increasing activity amongst engineers.—*Iron.*

The Registration of Plumbers.—At the Examination of Plumbers for Registration, just held at the City and Guilds Institute, applicants were present from several towns of North and South Wales, from Somerset, Stafford, and Hants, as well as from various parts of London and neighbourhood. The examinations embraced tests of joint-making, lead-laying, &c., and a set of questions relating to the qualities of materials, the construction of various forms of house fittings, and the principles of sanitation. The examiners were Messrs. Hudson, Webb, Millis, Clarke, and Lyne, the two last representing the Plumbing Classes at the Polytechnic and the United Operative Plumbers' Association respectively. Just half the number of applicants succeeded in pasing the examinations.—At a meeting at the Guildhall on the 29th ult., the Plumbers' Company issued their Certificates of Registration to plumbers from Bath, Battle, Brighton, Brynmawr, Burnham, Cardiff, Chester, Chippenham, Egham, Emsworth, Halifax, Hereford, Kirkby Lonsdale, Landport, Manchester, Salisbury, Sheffield, and Southampton.

The Sanitary State of Madrid.—The *Epoca* states that the death-rate of Madrid has increased so greatly during the last few years,—being now twice that of London,—that the Spanish Government has decided upon some radical reforms. Among them are an improved system of drainage, the laying out of open spaces for public parks, the establishment of public baths, improved hospitals, &c.

Sale of Topographical and Architectural Works.—Some uncommon copies of certain standard works were sold last week at Messrs. Hodgson's rooms in Chancery-lane. The prices realised were as follows:—Godwin's "Churches of London" (1838), an excellent copy, on large paper, 13s.; Britton & Pugin's "Public Buildings of London," with all the plates, large paper (1825), 7s.; Cox's "Annals of St. Helen's, Bishopsgate" (1876), 10s.; Howitt's "Northern Heights of London," 8vo., inlaid to royal 4to. size, and extended to three portly volumes by the insertion of portraits, views, cuttings, autograph letters, and the like, 13*l.*; similarly Grangerised and companion copies of Lewis's "History of St. Mary, Islington (1842), two volumes, 8*l.*; Park's "Topography and Natural History of Hampstead (1814), 6*l.*; Tomlins's "Perambulation of Islington" (1858), 4*l.* 12s. 6d.; Nelson's "History, Topography, and Antiquities of St. Mary, Islington" (1811), 3*l.* 7s. 6d.; and Palmer's "History of St. Pancras" (1870), many of the views on India paper, 3*l.* 3s.; a set of Lyson's "Environs," and "Middlesex Parishes" was bought for three guineas. Owen Jones and Jules Goury's "Alhambra," having many of the lithographs in gold and colours, two volumes, elephant folio size, on large paper, somewhat foxed, 4*l.* 17s. 6d.; and J. W. Clark's "Cambridge," with etchings on India paper, and vignettes, all artists' proofs, by A. Brunet-Debaines, H. Toussaint, and G. Greux, folio, of which only fifty copies were printed (1881), 2*l.* 10s. The works of Camden, Strutt, Dugdale, Leland, and Stukeley, as well as those of Sheraton, Parker, Neale, Britton, Pugin, Isabelle, Brayley, and others, were richly represented.

The Leeds and Yorkshire Architectural Society.—We have received the syllabus of lectures, &c., in connexion with this Society for the present session. It is as follows:—Nov. 12, President's Address and Distribution of Prizes. Nov. 26, "Furniture and Woodwork of the Seventeenth Century," with illustrations; by Mr. Arthur Marshall, A.R.I.B.A. Dec. 10, "Beauty in Colour and Form: how to seek, where to find," by Mr. J. Aldam Heaton. Jan. 7, 1889, "Art Metal-work," by Mr. J. Starkie Gardiner. Jan. 21, "Architects of the English Renaissance," by Mr. Reginald T. Blomfield, M.A. Feb. 4, "A Plea for Old English Art," by Mr. Robt. J. Johnson, F.R.I.B.A. Feb. 18, "Interior Decoration and Furniture," by Miss A. Garrett (London). March 4, "Colour in Architecture and Interior Decorations," by Mr. Wm Scott Morton. March 18, "Canterbury Cathedral," by Mr. C. Hadfield, F.R.I.B.A. April 29, Secretary's Report; Election of Officers.

PRICES CURRENT OF MATERIALS.

TIMBER.	£.	s.	d.	£.	s.	d.
Teak, E.I. ..... load	8	0	0	12	10	0
Sequoia, U.S. ..... foot cube	0	2	3	0	3	0
Birch, Canada ..... load	2	15	0	4	15	0
Fir, Dantsic, &c.	2	0	0	4	0	0
Oak ,, ...	2	0	0	4	10	0
Canada	4	0	0	6	10	0
Pine, Canada red	2	10	0	3	10	0
,, yellow	2	10	0	4	0	0
Lath, Dantsic ..... fathom	3	10	0	5	0	0
St. Petersburg	5	0	0	6	0	0
Wainscot, Odessa, crown	2	10	0	3	0	0
Deals, Finland, 2nd and 1st ...std. 100	9	0	0	10	0	0
,, 4th and 3rd	7	0	0	9	0	0
Riga	7	0	0	8	0	0
St. Petersburg, 1st yellow	9	10	0	15	10	0
,, 2nd ,, ...	9	0	0	10	0	0
,, white	7	10	0	10	10	0
Swedish	7	10	0	16	10	0
White Sea	8	10	0	17	10	0
Canada, Pine, 1st	16	0	0	25	10	0
,, ,, 2nd	10	10	0	17	10	0
,, ,, 3rd, &c.	7	10	0	10	10	0
Canada, Spruce, 1st	9	0	0	10	0	0
,, 3rd and 2nd	7	0	0	8	10	0
New Brunswick, &c.	6	10	0	8	0	0
Battens, all kinds	5	10	0	12	0	0
Flooring Boards, sq., 1 in., prepared, First	0	11	0	0	14	6
Second	0	8	0	0	10	9
Other qualities	0	5	6	0	7	9
Cedar, Cuba ..... foot	0	0	3½	0	0	3¾
Honduras, &c.	0	0	3½	0	0	3¾
Australian	0	0	2	0	0	3
Mahogany, Cuba	0	0	4½	0	0	5½
St. Domingo, cargo average	0	0	4½	0	0	5½
Mexican ,, ...	0	0	4	0	0	4½
Tobasco ,, ...	0	0	4½	0	0	5½
Honduras ,, ...	0	0	4½	0	0	5½
Box, Turkey ..... ton	5	0	0	12	0	0
Walnut, Italian ..... foot	0	0	4½	0	0	6
METALS.						
IRON—Bar, Welsh, in London ...ton	4	17	6	5	0	0
,, ,, at works in Wales ...	4	7	6	4	10	0
,, Staffordshire, in London ...	5	15	0	7	0	0
COPPER—						
British, cake and ingot ..... ton	80	0	0	81	0	0
Best selected	81	10	0	82	10	0
Sheets, strong	86	0	0	88	0	0
Chili, bars	78	5	0	0	0	0

METALS (*continued*).	£.	s.	d.	£.	s.	d.
YELLOW METAL.....lb.	0	0	7½	0	0	7½
LEAD—						
Pig, Spanish .....ton	13	10	0	0	0	0
English, common brands	0	0	0	0	0	0
Sheet, English.....	14	15	0	0	0	0
SPELTER—						
Silesian, special .....ton	19	0	0	19	2	6
Ordinary brands.....	18	17	6	19	0	0
TIN—						
Banca .....ton	104	0	0	0	0	0
Billiton	103	0	0	0	0	0
Straits	103	0	0	0	0	0
Australian	103	0	0	0	0	0
English Ingots.....	105	0	0	0	0	0
ZINC—English sheet .....ton	22	10	0	23	10	0

OILS.	£.	s.	d.	£.	s.	d.
Linseed .....ton	19	10	0	19	15	0
Cocoanut, Cochin	26	10	0	27	10	0
Ceylon	25	5	0	25	10	0
Palm, Lagos	24	0	0	24	10	0
Rapeseed, English pale	31	0	0	0	0	6
,, brown	29	10	0	0	0	0
Cottonseed, refined	22	5	0	22	10	0
Tallow and Oleine	19	0	0	45	0	0
Lubricating, U.S.	5	0	0	6	0	0
,, refined	7	0	0	12	0	0
TURPENTINE—						
American, in casks.....cwt.	1	13	6	0	0	0
TAR—						
Stockholm .....barrel	1	1	6	0	0	0
Archangel	0	11	0	0	11	6

COMPETITIONS, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITION.

Nature of Work.	By whom required.	Premium.	Designs to be delivered.	Page.
Alterations to Present Chapel or New Chapel	Merthyr Tydfil Metho. Church Bdng. Com.	10*l.* 10s.	Jan. 1st	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Annual Repairs.....	School Brd. for London	*Official*.....	Nov. 7th	xi.
Wood Paving	St. Margaret, (Westminster) Vestry	G. R. W. Wheeler	do.	xi.
Partial Re-construction, Church, Southamptn	The Committee.....	W. H. Mitchell	Nov. 12th	xiii.
Sewering and Making-up Roads, Footpaths, &c	Beckenham Local Bd.	G. B Carlton.....	do.	ii.
Road-making and Paving Works	Willesden Local Board	O. Claude Robson	Nov. 13th	ii.
Kerbing, Tar-paving, &c.....	Lewisham Bd. of Works	*Official*.....	do.	xi.
Road-making and Paving Works	Fulham Vestry.....	J. P. Norrington	Nov. 14th	xiii.
Well-sinking, &c.	Hastings Union.....	P H Tree	Nov. 15th	xi
Offices, &c.	Fulham Union	H. Saxon Snell & Son...	do.	ii.
Underground Urinals, Water Closets, &c.....	Commis of Sewers	*Official*.....	Nov. 16th	ii.
Water Tower, Wrought-Iron Tank, &c.	Southwold Waterworks	Urban A. Smith	Nov. 19th	xiii.
Town Hall, Additions, &c.	Northampton Cor.	*Official*.....	Nov. 20th	xiii.
Waterworks	Basford U.R.S.A.	G. Hodson.....	Nov. 26th	xi.
Hospital, Eastbourne	The Committee.....	A. M. Mowbray	Not stated	xiii.
Erection, &c., of Barrack Buildings, &c.	The Salvation Army ...	J. W. Dunford.....	do.	ii.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
Temporary Architectural Draughtsman	York Corporation	3*l.* weekly	Nov. 6th	xvi.
Clerk of Works	Fulham Vestry.....	2*l.* 12s. 6d. weekly...	Nov. 8th	xvi.
Inspector of Nuisances	Wandsworth Bd. of Wks	2*l.* 10s. weekly	Nov. 12th	xvi.
Accountant Clerk	Civil Service Com.	Not stated	Nov. 21st	xvi.

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *Noon on Thursdays.*]

BOSTON.—For altering the old oil-cake and flour-mills, High-street, Boston, into Salvation Army barracks buildings, for "General" Booth. Mr. J. Williams Dunford, architect and surveyor, 101, Queen Victoria-street, London, E.C.

Coxhead, Leytonstone	£673 0 0
Parker & Hinds, Boston	626 0 0
Greenfield, Boston	604 0 0
Pinder & Leng, Boston	571 9 0
Burnett, Grimsby	525 0 0
Alderton & Wheeler, Cambridge	515 0 0
Leafe, Boston	440 0 0

BROMYARD.—For the erection of a small coffee tavern at Bromyard, near Worcester, for Mr. Richard Phipps. Mr. F. W. Dorman, architect, Northampton:—

John Inwood	£669 0 0
R. Lewis.....	604 0 0
W. James	575 0 0
Rouse Bros. (accepted)	495 0 0

BROMYARD.—For the erection of a mill cottage, at Bromyard, near Worcester, for Mr. R. Phipps. Mr. F. W. Dorman, architect, Northampton:—

Rouse Bros.....	£410 0 0
John Inwood	380 0 0
Robert Lewis (accepted)	335 0 0

BURTON-ON-TRENT.—For the erection and completion of Salvation Army barracks buildings for "General" Booth. Seating accommodation provided for 900 persons. Estimates include seating lighting, and hot-water heating. Mr. J. Williams Dunford, architect and surveyor, 101, Queen Victoria-street, London, E.C.:—

Hodges, Burton	£1,250 0 0
Lowe & Sons, Burton	1,200 0 0
Mellors, Burton	1,063 16 0
Jarvis, Banbury	965 0 0
Alderton & Wheeler, Cambridge.....	898 0 0
Coxhead, Leytonstone (accepted) ...	848 0 0

CLACTON-ON-SEA.—For the erection af a villa residence in Carnarvon-road. Mr. E. C. Horner, architect, 99, Gresham-street, E.C.:—

J. C. Allen (accepted)	£925 0 0

CROYDON.—For the erection of two villa residences in Camden-road, for Mr. J. Kendall. Mr. E. C. Horner, architect, 99, Gresham-street, E.C.:—

D. Henry (accepted)	£2,100 0 0

HAMMERSMITH.—For making up, paving, &c., the following roads in Hammersmith, for the Vestry. Mr. H. Mair, surveyor:—

Rylett-crescent.	
Neave & Son	£723 0 0
Woodhams & Fry.....	695 0 0
Nowell & Robson	670 0 0
Tomes & Wimpey.....	647 0 0
Neal & Co.....	629 0 0
Bell	619 0 0
Rogers.....	608 0 0
Adams.....	608 0 0
Coat (accepted)	591 0 0
Eyot-gardens.	
Woodhams & Fry.....	£778 0 0
Neave & Son	720 0 0
Neal & Co.....	705 0 0
Bell	649 0 0
Nowell & Robson	627 0 0
Rogers	617 0 0
Adams	595 0 0
Coat.....	591 0 0
Tomes & Wimpey (accepted)	557 0 0
Frog Island.	
Neave & Son	£244 0 0
Neal & Co.....	238 0 0
Bell	229 0 0
Woodhams & Fry.....	219 0 0
Coat.....	215 0 0
Nowell & Robson.....	211 0 0
Rogers.....	200 0 0
Adams.....	197 0 0
Tomes & Wimpey (accepted)	196 0 0
Adie-road.	
Neave & Son	£573 0 0
Bell	549 0 0
Woodhams & Fry.....	541 0 0
Tomes & Wimpey.....	509 0 0
Nowell & Robson	499 0 0
Coat.....	495 0 0
Rogers.....	489 0 0
Neal & Co.	487 0 0
Adams (accepted).....	478 0 0
Wendell-road. Section 1.	
Neave & Son	£540 0 0
Neal & Co.	473 0 0
Woodhams & Fry.....	421 0 0
Nowell & Robson	399 0 0
Bell	397 0 0
Rogers.....	375 0 0
Coat.....	365 0 0
Tomes & Wimpey.....	364 0 0
Adams (accepted)	362 0 0
Wendell-road. Section 2.	
Neave & Son	£626 0 0
Woodhams & Fry.....	530 0 0
Nowell & Robson.....	517 0 0
Bell	517 0 0
Tomes & Wimpey	498 0 0
Neal & Co.....	492 0 0
Rogers.....	489 0 0
Coat	486 0 0
Adams (accepted)	480 0 0

ENFIELD.—For erection of eight cottages for Mr. H. Bostock. Mr. W. Hunter Turner, architect, 58, Finsbury-pavement, E.C.:—

Williams & Wright (accepted)	£1,640 0 0

GRIMSBY.—For the erection and completion of Salvation Army barrack buildings, Grimsby, accommodating 1,120 persons, seating, lighting, and hot-water heating included. Mr. J. Williams Dunford, architect and surveyor, 101, Queen Victoria-street, London, E.C.:—

Alderton & Wheeler, Cambridge.....	£1,380 0 0
W. H. Smith, Grimsby	1,300 0 0
Hewins & Goodhand, Grimsby.....	1,249 0 0
T. H. Burnett, Grimsby.....	1,182 0 0
J. White, Grimsby	1,172 10 0
F. J. Coxhead, Leytonstone	1,159 0 0
J. Leaning, Grimsby	1,130 0 0
T. Enderly & Co., Grimsby	1,112 6 0
H. Marrows, Grimsby.....	1,003 0 0
E. Good, Hull	995 0 0
Walker & Cook, Grimsby	990 0 0
F. Grant, Cleethorpes*	920 0 0

* Accepted.

HENLEY-ON-THAMES.—For new offices and premises, Reading-road, for Messrs. George Dunlop & Son. Mr. George W. Webb, architect, 14, Friar-street, Reading:—

G. S. Lewis, Reading.....	£806 10 0
Bottrill & Son, Reading	760 0 0
G. Searle, Reading	747 0 0
C. Clements, Henley	746 0 0
J. Weyman, Henley	731 0 0
W. Hamilton, Henley	665 0 0
W. H. Simonds, Reading (accepted)...	630 0 0

LAMBETH.—For pulling down and rebuilding the "White Horse" Tavern, Cornwall-road, Lambeth, and improved dwellings adjoining. Mr. R. A. Lewcock, architect, 88, Bishopsgate-street Within, E.C.:—

Ivory	£4,545 0 0
Walker	4,500 0 0
Anley	4,472 0 0
Spencer & Co.	4,460 0 0
Dawes	4,294 0 0
Beale	4,270 0 0
Downs	4,185 0 0
Balaam Bros.....	4,180 0 0
Stephenson	3,942 0 0

LONDON.—For the enlargement of the Netherwood-street School, Kilburn (Marylebone AB[1]), by 600 places (exclusive of "provisions"), for the School Board for London. Mr. T. J. Bailey, architect:—

Wall Bros.....	£6,979 0 0
Hart Bros.	6,644 0 0
Stimpson & Co.*	6,600 0 0

* Recommended by the Works Committee for acceptance.

LONDON.—For erecting business premises, &c., High-street and Greenland-place, Camden Town, for Mr. William Cater. Mr. Robert J. Beale, architect:—

J. W. Dixon, Highgate	£3,350 0 0
W. Scrivener & Co., Fitzroy-road, N.W.	3,110 0 0
G. Green, St. Pancras.....	3,087 0 0
Macfarlane Bros., Hornsey-road, N.	3,085 0 0
S. R. Lamble, Kentish Town.....	2,927 0 0
Gould & Brand, Camden Town	2,853 0 0
E. Toms, Camden Town (accepted)...	2,659 0 0

LONDON.—For erecting business premises, &c., High-street and Greenland-place, Camden Town, for Messrs. Miller & Beale, glass merchants. Mr. Robert J. Beale, architect:—

Gould & Brand, Camden Town*	£2,539 0 0

* Accepted.

LONDON.—For erecting sixteen houses and two shops, Affleck-street, Pentonville, for Mr. Alfred Attneave. Mr. W. Gilbee Scott, architect. Quantities by the architect:—

					A.		
Colls & Son	£13,362	0	0	...	£202	0	0
J. Woodward.....	13,162	0	0	...	192	0	0
W. Downs	12,445	0	0	...	175	0	0
C. Cox.....	12,133	0	0	...	150	0	0
F. & F. J. Wood ...	12,127	0	0	...	194	0	0
T. Boyce.....	12,095	0	0	...	145	0	0
Scrivener.....	12,004	0	0	...	304	0	0
Harris & Wardrop...	11,912	0	0	...	135	0	0
W. Johnson	11,859	0	0	...	150	0	0
Faulkener	11,796	0	0	...	297	0	0
Godfrey & Son	11,732	0	0	...	189	0	0
J. H. Johnson*.....	11,443	0	0	...	250	0	0
Hearne & Co.....	11,373	0	0	...	160	0	0

* Accepted.

A. Deduct, if alternate estimate not carried out.

LONDON.—For the erection of seven shops and sundry buildings in Bermondsey New-road, for Mr. Armfield. Mr. Edward Crosse, architect. Quantities supplied by Mr. T. J. Fife:—

Henderson	£3,895 0 0
Tyerman	3,677 0 0
W. Downs	3,645 0 0
Holloway	3,543 0 0
Tarrant	3,513 0 0
J. & J. Greenwood	3,467 0 0
Spencer & Co.	3,450 0 0
Rider & Son	3,443 0 0
H. & F. H. Higgs	3,400 0 0
A. White & Co.....	3,379 0 0
W. Shepherd...	3,357 0 0
W. & F. Croaker	3,320 0 0

LONDON.—For the erection of seven shops in the forecourts of Nos. 207 to No. 217, Pentonville-road for Messrs. Howe & Smith. Mr. John Farrer, architect:—

W. Smith	£3,197 0 0
E. Houghton, Stroud-green	3,148 0 0
Wilkinson Bros.	2,971 0 0
J. Smith & Sons	2,920 0 0
C. C. Brown	2,885 0 0
Green & Lee	2,850 0 0
Lobb & Oliver	2,778 0 0

LONDON.—For structural alterations and repairs, Brushfield-street, for Mr. Saul Solomon. Mr. W. Hunter Turner, architect, 58, Finsbury-pavement, E.C.:—

J. A. Reed (accepted)	£175 0 0

LONDON.—For proposed additions to Infirmary, Havil-street, Peckham-road, for the Guardians of the Poor of St. Giles, Camberwell. Mr. Robert P. Whellock, architect, 45, Finsbury-pavement, E.C. Quantities by Messrs. Franklin & Andrews, 25, Ludgate-hill, E.C.:—

Barrett & Powell	£19,340	0	0
R. & E. Evans	18,219	0	0
G. Parker	17,888	0	0
Bunning & Sons	17,299	0	0
Hart Bros.	17,218	0	0
S. Grist	17,110	0	0
E. Lawrence & Sons	17,029	0	0
Martin, Wells, & Co.	17,000	0	0
W Smith	16,947	0	0
Perry & Co.	16,922	0	0
Higgs & Hill	16,900	0	0
Geo. Gibson, Southall, Middlesex	16,876	0	0
Wm. Smith, Kennington	16,779	0	0
W. & F. Croaker	16,770	0	0
Balaam Bros.	16,679	0	0
J. J. Greenwood	16,630	0	0
J. Shillitoe & Sons, Bury St. Edmunds	16,625	0	0
F. Tarrant	16,592	0	0
W. Stubbs	16,564	0	0
Dove Brothers	16,520	0	0
James Longley & Co.	16,452	0	0
Bissett & Sons, Sheffield	16,397	0	0
Prestige & Co.	16,360	0	0
Hobbs & Co., Limited	16,338	0	0
Killby & Gayford	16,227	0	0
F. & H. F. Higgs	16,150	0	0
Mark Gentry	16,170	0	0
A. Brickell	16,135	0	0
R. P Hockley, Grantham	16,100	0	0
W. Sheppard	16,100	0	0
Holloway Bros.	16,044	0	0
H. & L. Holloway	15,943	0	0
Chas. Wall	15,840	0	0
J. T. Chappell	15,831	0	0
Kirk & Randall	15,820	0	0
John Mowlem & Co.	15,809	0	0
B. Nightingale	15,740	0	0
W. Downs	15,688	0	0
Chas. Ansell	15,650	0	0
Ward, Clark, & Co.	15,512	0	0
Hugh Knight	15,485	0	0
James Holloway	15,339	0	0
J. O. Richardson	15,258	0	0
Brass & Son	15,153	0	0
F. Taylor	15,040	0	0
J. Allen & Sons	14,665	0	0

LONDON.—For the erection of warehouse, Green-street, Bethnal Green, for Mr. John Whitehead. Mr. Wm. Hunter Turner, architect, 58, Finsbury-pavement, E.C.:—

Williams & Wright	£1,577	10	0
Reed, Walthamstow	1,260	0	0
Wire, Bethnal Green	1,199	0	0
C. Turner	1,149	0	0
Yardley & Sons, Clerkenwell	1,100	0	0

NORTHAMPTON.—For the erection of four villa residences, for Mr. T. P. Dorman, on the East Park Estate, Northampton. Mr. F. W. Dorman, architect:—

Cosford	£4,996	0	0
Dunkley	4,272	0	0
Martin	4,100	0	0
Wingrove	3,995	0	0
Green Bros.	3,990	0	0
Beardsmore	3,940	0	0
Heap	3,795	0	0
Treson	3,795	0	0
Fisher (accepted)	3,774	0	0

NORTHAMPTON.—For the erection of stables, coach-house, &c., for Mr. T. P. Dorman, Cliftonville, Northampton. Mr. F. W. Dorman, architect:—

Cosford	£463	0	0
Heap	420	0	0
Fisher	407	0	0
Martin	405	0	0
Wingrove	399	0	0
Dunckley	385	0	0
Green Bros. (accepted)	384	0	0

PUTNEY.—For house, Putney-hill, S.W. Messrs. Lee Bros. & Pain, 8, Adelphi-terrace, architects. Quantities supplied:—

Lathey Bros.	£2,829	0	0
Adamson & Sons	2,553	0	0
S. W. Aries	2,530	0	0
Robert Aviss (accepted)	2,480	0	0

READING.—For new bakehouse and premises, Prince of Wales-avenue, Elm Lodge Estate, for Mr. W. Childs. Mr. Geo. W. Webb, architect, 14, Friar-street, Reading:—

Estates Workmen (accepted)	£650	0	0

READING.—For making upper portion of Cranbury-road, Elm Lodge Estate, including sewage and surface-water drains. Mr. Geo. W. Webb, architect, Reading:—

W. Reeves, Reading (accepted)	£164	0	0

RINGSTEAD (Northants).—For the erection of a public-house at Ringstead, near Northampton, for Messrs. P. Phipps & Co., Limited. Mr. F. W. Dorman, architect, Northampton:—

Clayson	£660	0	0
Ward	576	0	0
Marriott	560	0	0
Adams	558	0	0
Freeman & Sons (accepted)	500	0	0

STRATFORD (Essex).—For the taking down and rebuilding sundry works at Messrs. Dane & Co.'s Printing Ink Manufactory, Sugar House-lane:—

Stone & Co.	£727	0	0
Lascelles & Co.	515	0	0
Bishop & Webb	488	0	0
A. Nicholls	435	0	0
Green & Co. (accepted)	354	0	0
Boughtwood & Co.	350	0	0

WALTHAMSTOW.—For erection of five cottages, Tower Hamlets. Mr. W. Hunter Turner, architect, 58, Finsbury-pavement, E.C.:—

Williams & Wright (accepted)	£800	0	0

WORTHING.—For alterations and additions to Barracks buildings, for the Salvation Army. Mr. J. Williams Dunford, architect and surveyor, 101, Queen Victoria-street, London, E.C.

J. & T. Lelliott, Worthing	£450	0	0
W. H. Lawle, Worthing	398	0	0
F. Landell, Worthing	360	0	0
F. J. Coxhead, Leytonstone	348	0	0
G. Baker, Worthing	315	0	0
Alderton & Wheeler, Cambridge	298	0	0
C. Wright, Broadwater*	280	0	0

* Accepted.

TO CORRESPONDENTS.

S. & M. (should send amounts).—H. I. N. (ditto).—E. K.—G. F. P.—"One who Does not Compete" (too late).—W. H. (ditto).

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Addressed to No. 46, Catherine-street, W.C.

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SPECIAL.—ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY mornings;

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Now ready.

READING CASES, { NINEPENCE EACH. By post (carefully packed), 1s.

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BOX GROUND. | COMBE DOWN.
WESTWOOD GROUND. | STOKE GROUND.

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THE CHELYNCH STONE. The stone from these quarries is known as the "Weather Beds," and is of a very crystalline nature, and undoubtedly one of the most durable stones in England.

THE BRAMBLEDITCH STONE. Is of the same crystalline nature as the Chelynch Stone, but finer in texture, and more suitable for fine moulded work.

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Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds, and milk-rooms, graneries, tun-rooms, and terraces. [ADVT.

Asphalte.
Seyssel, Patent Metallic Lava, and White Asphaltes.
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INK-PHOTO PROCESS,
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Cannon-street, E.C. [ADVT.

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121, Bunhill-row, London, E.C.
HIGH-CLASS JOINERY,
LASCELLES' CONCRETE,
CONSERVATORIES AND GREENHOUSES.
Estimates given on Application.

Garside's Noted Bedfordshire Coarse and Fine Silver Sand.—Is perfectly free from impurity, and the best and cheapest in the market. All qualities in stock, for every purpose required in the building trade, for filtration, or for nursery purposes. All pure grit!
Apply to
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The Bank of England and its Branches, including New Law Courts Branch, now building.

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STEEL SAFES, STRONG-ROOM & PARTY-WALL DOORS.

SELF-CLOSING DOORS, FOR THEATRES AND PUBLIC BUILDINGS,
As approved by the Metropolitan Board of Works (used in large numbers at Covent Garden Theatre).

IMPORTANT COMMUNICATION.—FIRE AT WHITELEY'S.

WILLIAM WHITELEY, Westbourne Grove,
London, Oct. 12th, 1887.

HOBBS, HART, & CO., LIMITED.

GENTLEMEN.—It affords me very much pleasure to express to you my satisfaction and admiration at the splendid fire-resisting powers of your Strong-room doors and the Safes.

The recent fire at my establishment in my opinion subjected them to the greatest possible test, and through all, they proved invulnerable.

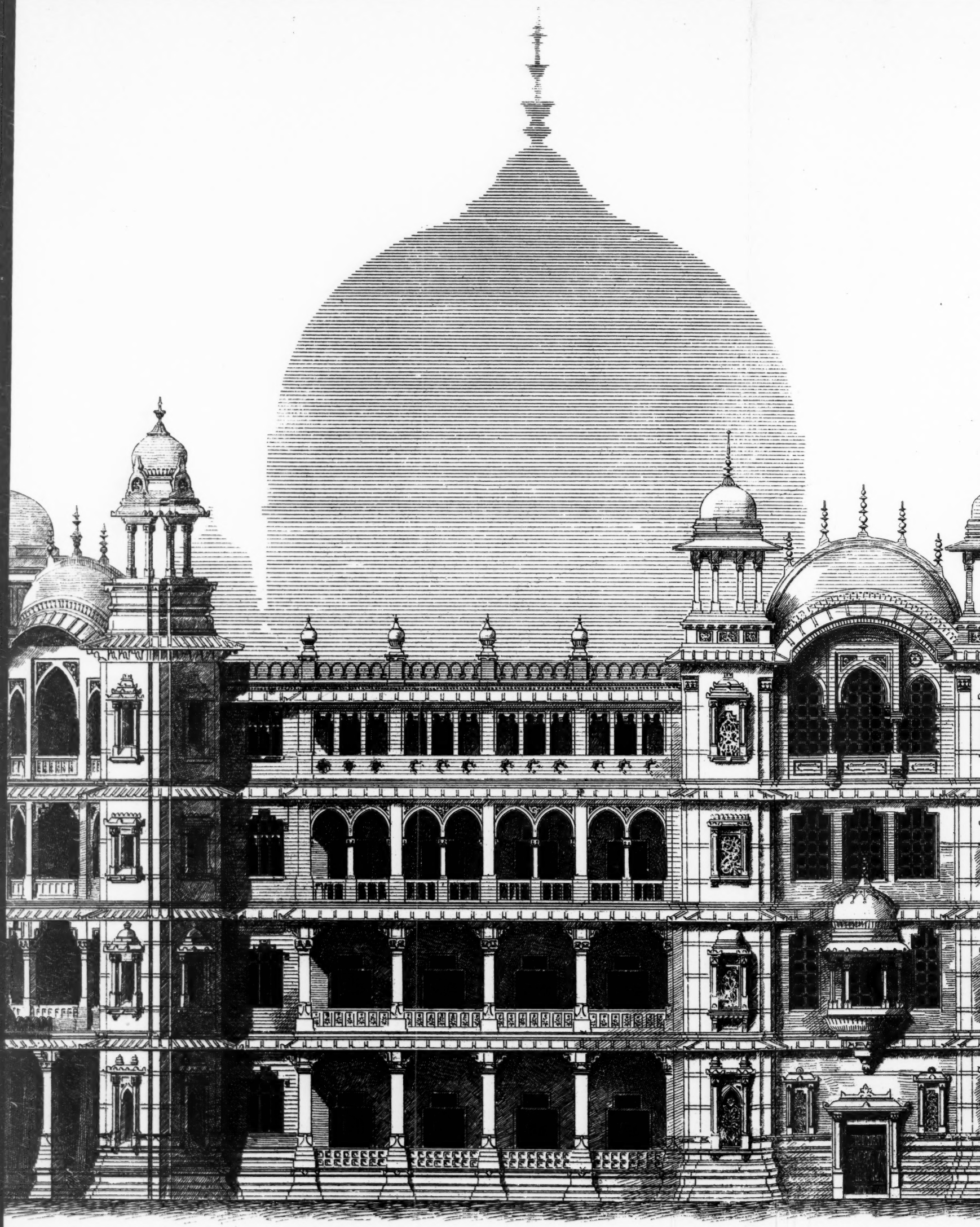
The contents of both Strong Rooms and Safes were entirely preserved, although the fire was of such intense destructive force.

You will be pleased to hear that it has been decided to adopt your Patent Clutch-rebated Doors for all the party-walls in the new buildings now in course of erection.—I am, Gentlemen, faithfully yours,

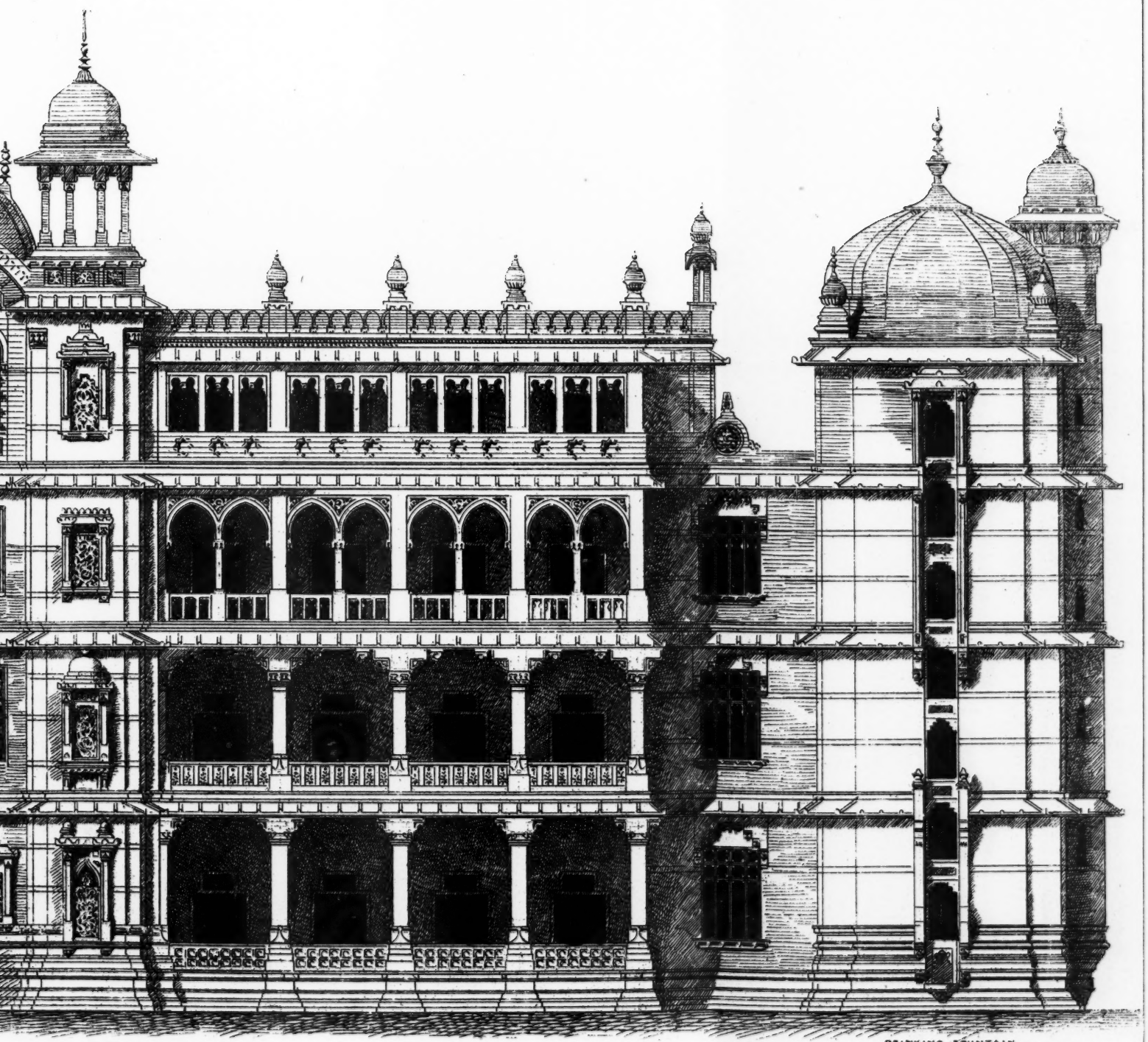
(*Signed*) WILLIAM WHITELEY.

Offices and Warehouse: 76, CHEAPSIDE, London; Manufactories, Wharncliffe Works, Arlington-street, London, N.

BOMBAY MUNICIPAL OFFIC



OMBAY MUNICIPAL OFFICES COMPETITION; FIRST PREMIATED DESIGN. ELEVATION TOWARDS HORNBY ROAD.—Mr. R. F. Chisholm, F.R



DRINKING FOUNTAIN

RECORD - TOWER -

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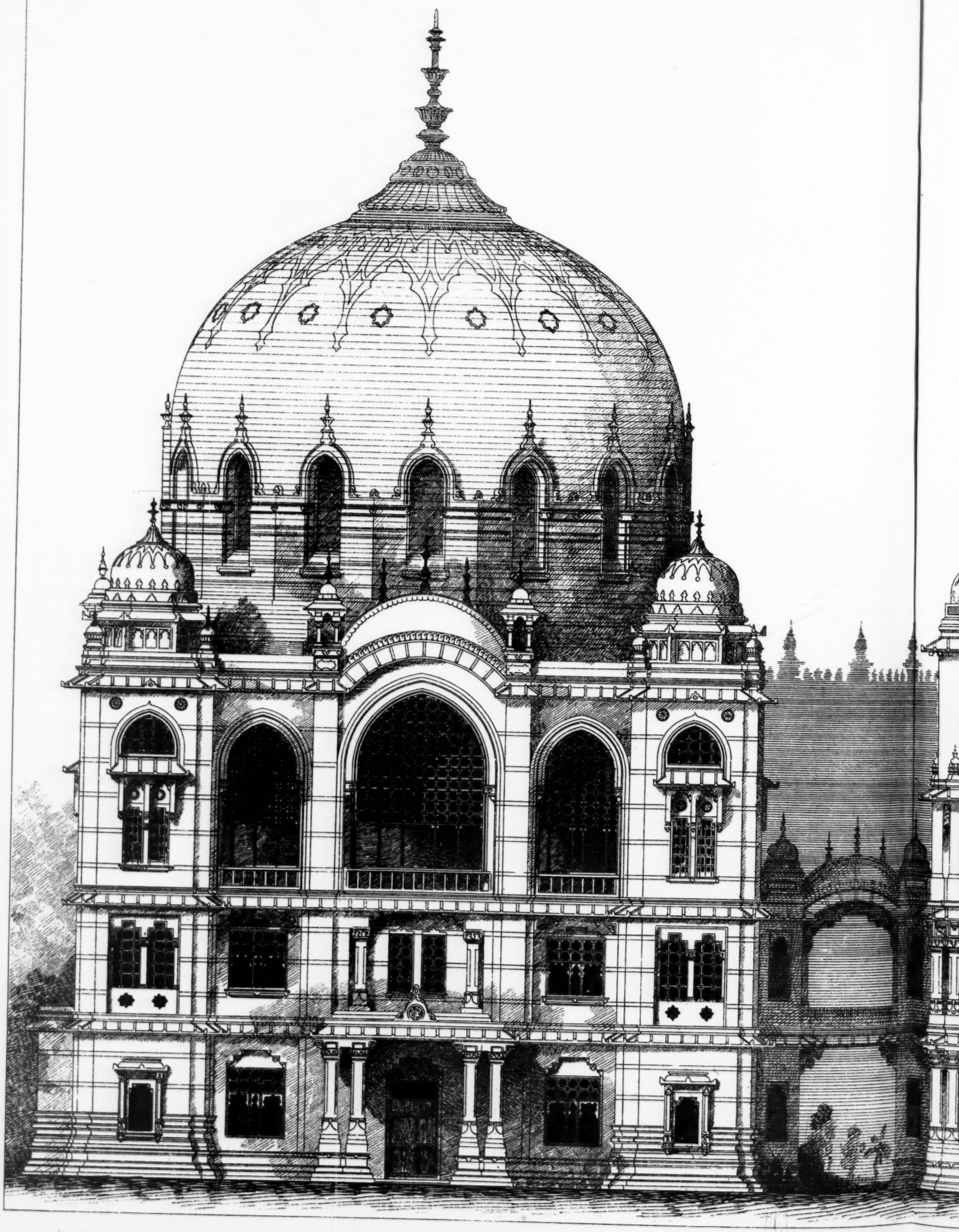
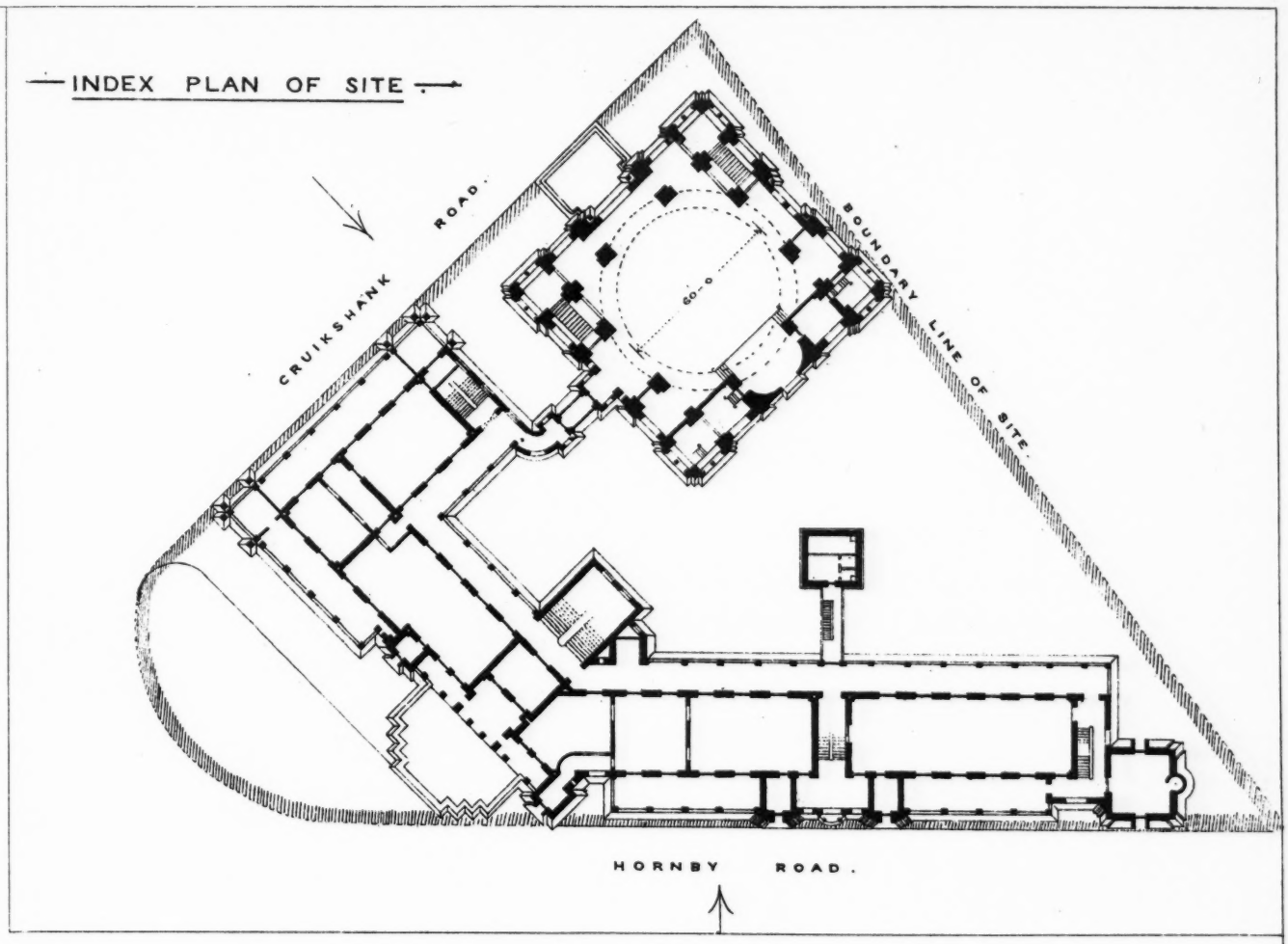


BOMBAY MUNICIPAL OFFICES COMPETITION; FIRST PREMIATED DESIGN. ELEVATION



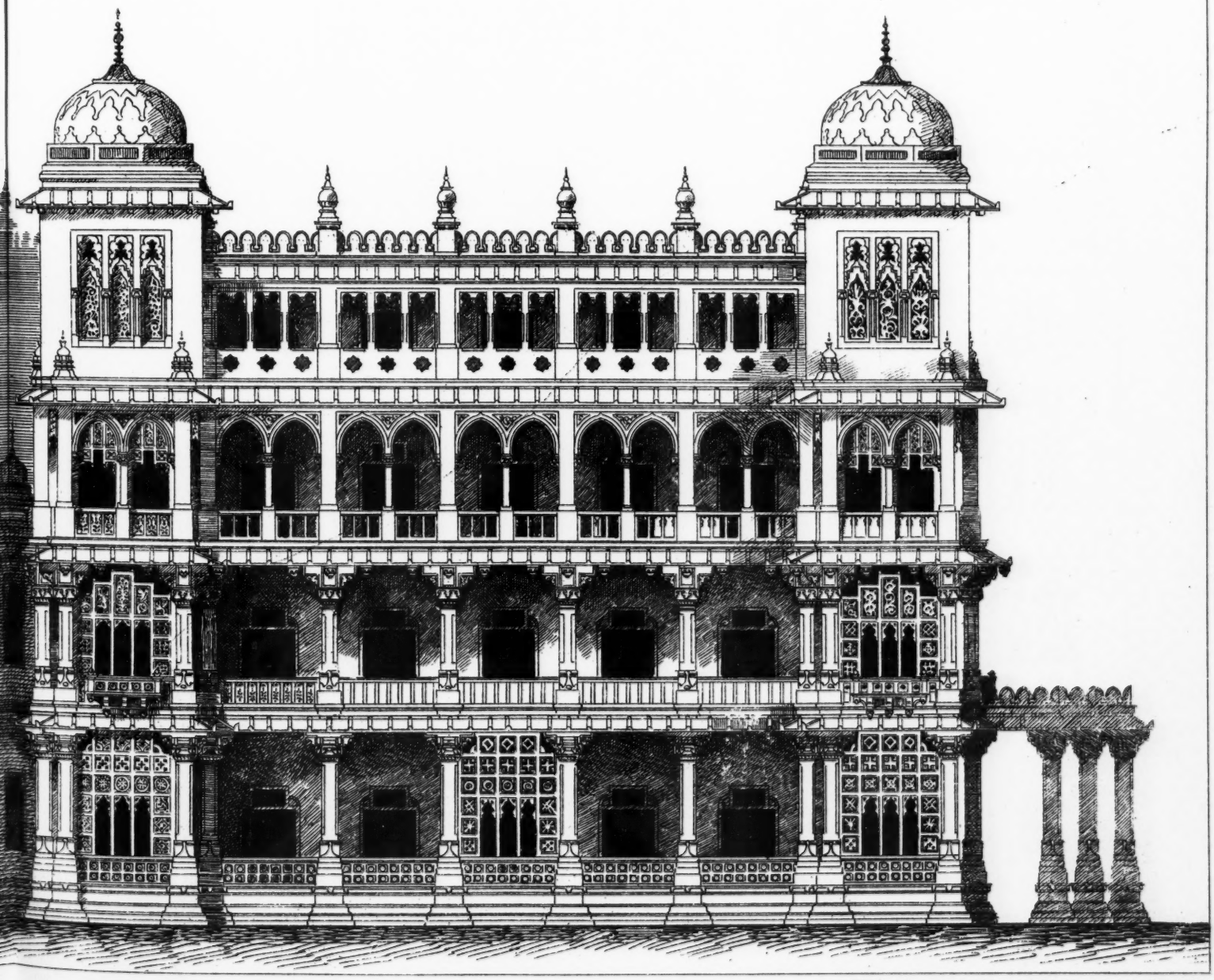
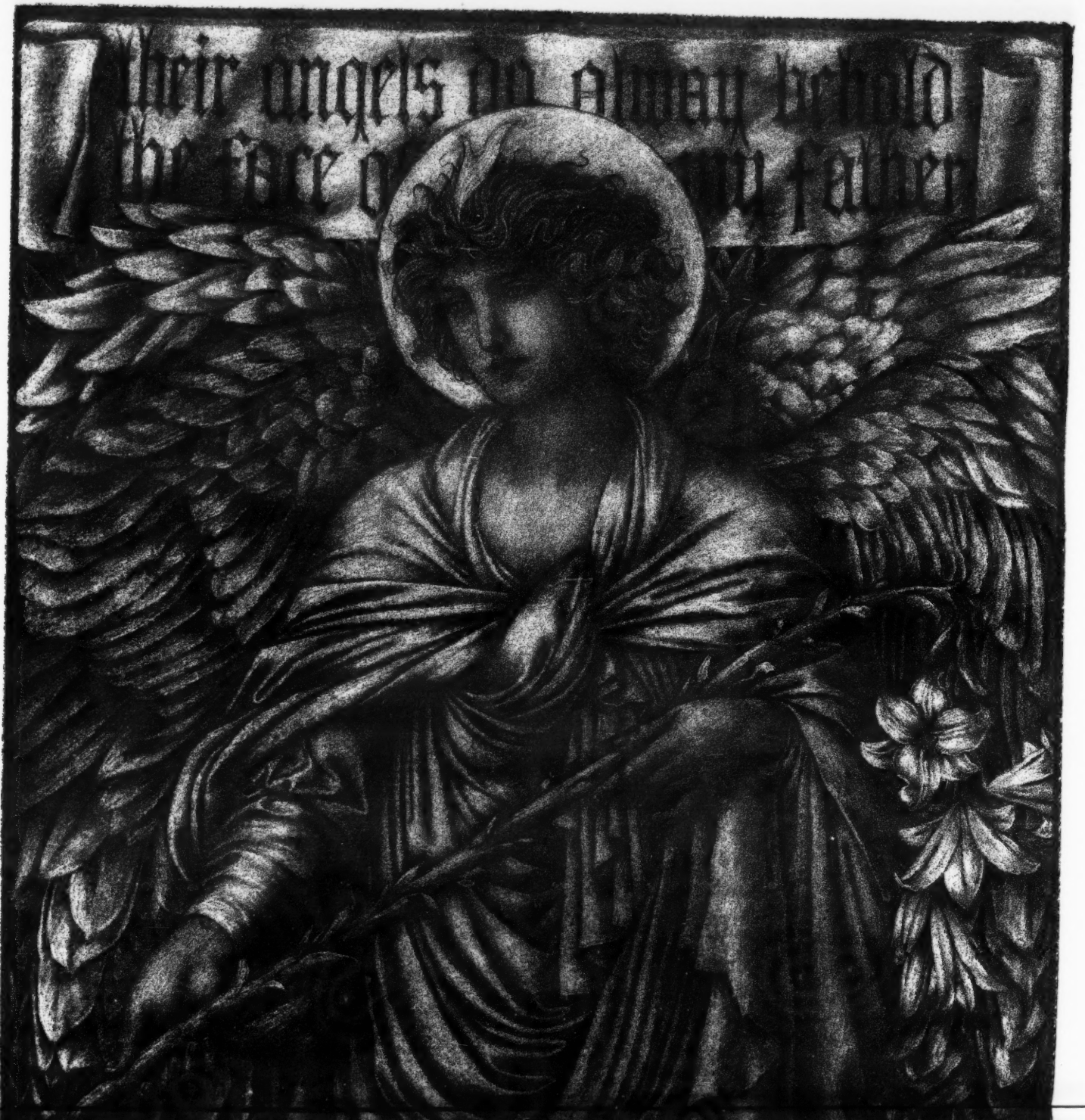


PHOTO-LITHO. SPRAGUE & Co 22, MARTINS LANE, CANNON ST, LONDON, E.C.

LEVATION TOWARDS CRUIKSHANK ROAD.—Mr. R. F. Chisholm, F.R.I.B.A., Architect.

"INK-PHOTO," SPRAGUE & Cº, 22, MARTINS LANE, CANNON ST, LONDON, E.C.

DESIGN FOR STAINED GLASS, ALDINGTON CHURCH, KENT.—By Messrs. Shrigley and Hunt.